Project Title

Increasing patient admitted into GS emergency abscess DS-23 workflow

Project Lead and Members

Project lead: Dr Jesse Hu

Project members: Dr Cheong Chern Yuen, A/Prof Philip Iau, A/Prof Cheah Wei Keat, Dr Quek Lit Sin, Joyce Loke, Janna Goh, Dr Choo Wee Sen, Wong Yik Sin, Joanne Yeo, Meng Zhiyan, Evelyn Low, Josephine Wong, Xu Boyi, Bay Swee Leng, Goh Yee Hwee, Kelvin Lew

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Medical, Nursing, Healthcare Administration

Applicable Specialty or Discipline

Surgery

Project Period

Start date: April 2019

Completed date: October 2019

Aims

To improve emplacement rate for eligible patients into the emergency DS-23 workflow by establishing a robust referral system to be completed before October 2019.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

Most importantly, we learnt that to increase recruitment into a new workflow, we need to change culture and mindset of the end user. In order to do that, all parties must believe in the change and benefits it can bring to the patient.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign, Value Based Care, Productivity, Quality Improvement, Workflow Redesign

Keywords

Abscess Day Surgery

Name and Email of Project Contact Person(s)

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INCREASING PATIENT ADMITTED INTO GS EMERGENCY ABSCESS DS-23 WORKFLOW

- ☐ SAFETY
- ☐ QUALITY
- ☑ PATIENT EXPERIENCE
- ☑ PRODUCTIVITY
- ☑ COST
- ☑ TEAMWORK
- ☑ COMMUNICATION

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FACILITATED BY KELVIN LEW & DESMOND WONG

Define Problem, Set Aim

Problem

General Surgery Emergency Abscess Day Surgery 23-hours (DS-23) Workflow was established in November 2018 with aims to provide faster surgical care, reduce hospital length of stay, reduce hospital bed occupancy rate and cost for patients admitted via Emergency Department at Ng Teng Fong General Hospital with abscess requiring surgery. These patients will receive surgical ambulatory emergency care instead admission into the general ward.

However, between January to March 2019, only 10% of patients eligible for the workflow were emplaced onto the emergency DS-23 workflow.

Aim

To improve emplacement rate for eligible patients into the emergency DS-23 workflow by establishing a robust referral system to be completed before October 2019.

Establish Measures

The workflow was started during office hours in November 2018 and gradually extended to 24 hours except Sunday and Public holidays in January 2019. However, despite the extension of referral hours, the referral pattern remained dismal, only 10% of patients eligible were enrolled into the workflow.
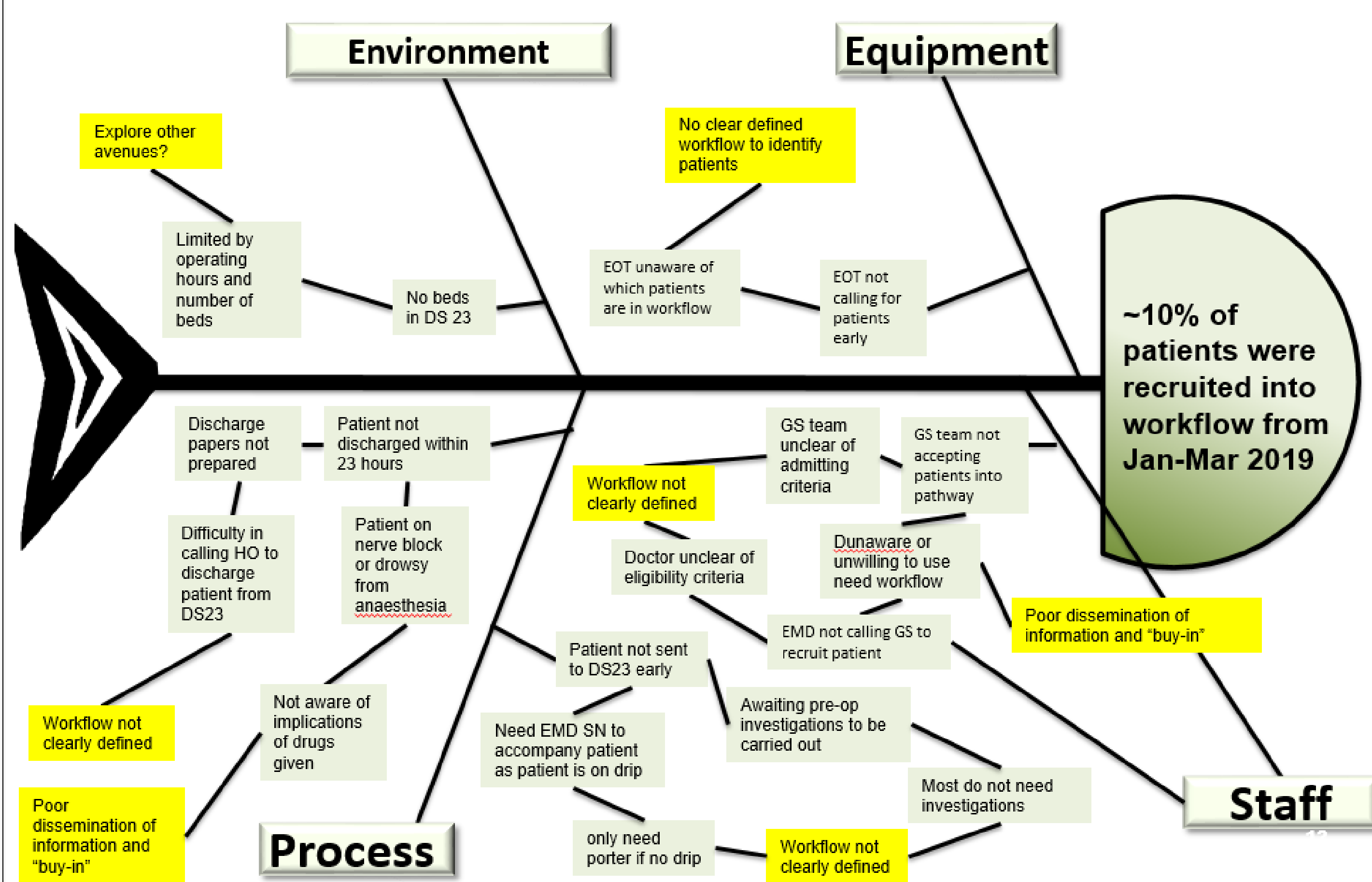The outcome measure is to increase the number of eligible patients into the DS-23 workflow.
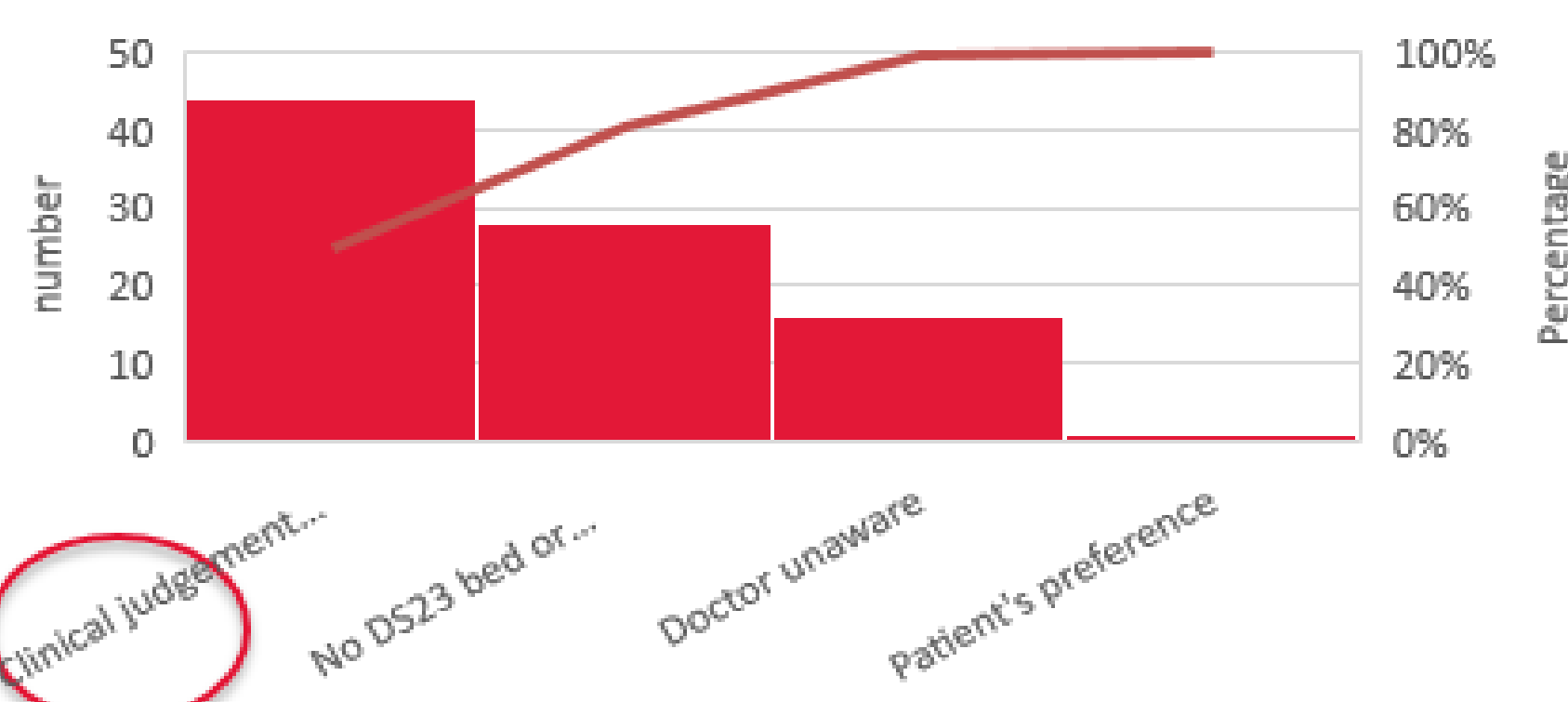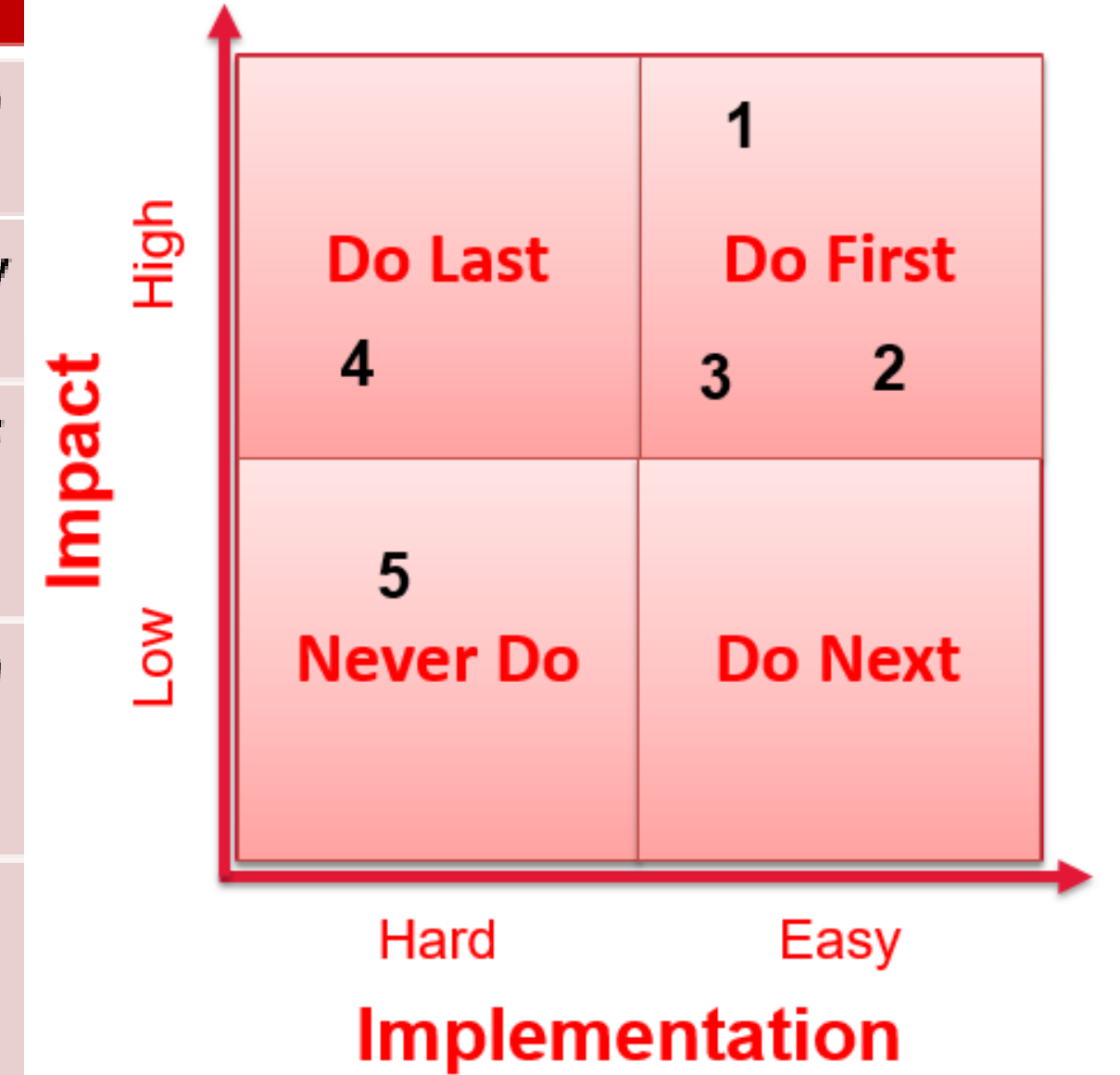The balancing measure is to maintain low DS-23 to inpatient conversion rate.

Outcome Data: Percentage of ED to DS cases
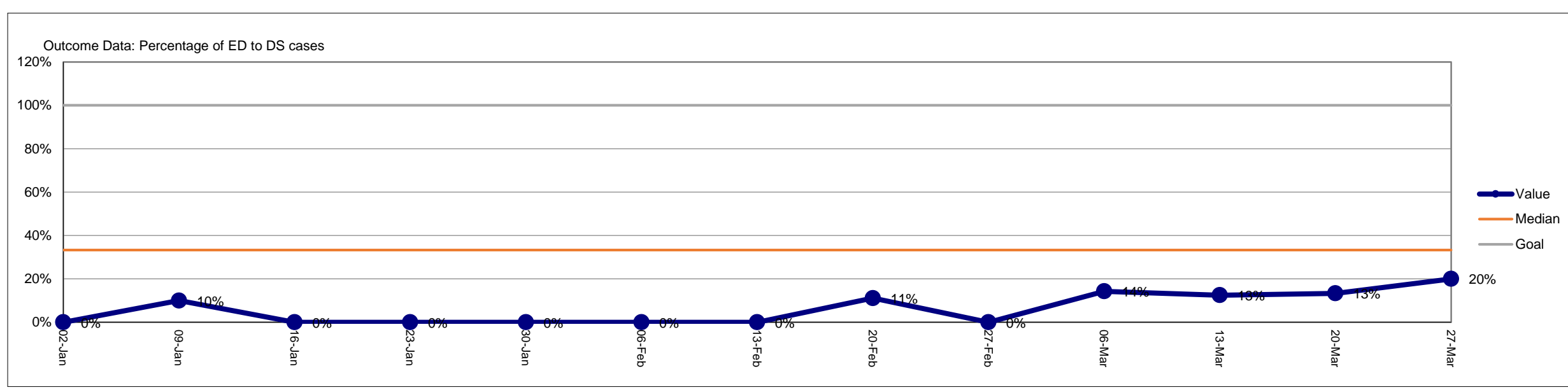
Analyse Problem

FISHBONE DIAGRAM

Pareto chart of why patients are not recruited into workflow

Ng Teng Fong General Hospital

Jurong Community Hospital

Select Changes

| Root Cause		Potential Solutions
Clinical judgement or clinician's preference	1	Well defined inclusion/exclusion criteria agreed by all parties
	2	Refine workflow to make it easy for everyone to follow
	3	Minimize variation in treatment plan by using standard smart text in EPIC
	4	Change clinician's perception on how such cases are usually managed
	5	Senior clinician to confirm clinical judgement

Impact (High/Low) vs Implementation (Hard/Easy):
- Do Last (4) — High/Hard
- Do First (3, 2) — High/Easy, with 1 at top
- Never Do (5) — Low/Hard
- Do Next — Low/Easy

Test & Implement Changes

CYCLE	PLAN	DO	STUDY	ACT
1	To establish a robust referral system – refine workflow for all parties involved to agree and understand the workflow	Refined inclusion criteria, created smart texts in EPIC to increase uptake on standardized treatment, EOT to prioritize patients, anaesthetist to give daycase anaesthesia	Increased recruitment into workflow and low conversion rate from DS23 to inpatient	Changes adopted
2	To increase awareness among clinicians (GS, ED) to recruit eligible patients into workflow	Workflow template creation and distribution to clinicians (GS, ED), weekly reminder via texts	Ongoing	

Outcome Measure: Percentage of eligible patients recruited
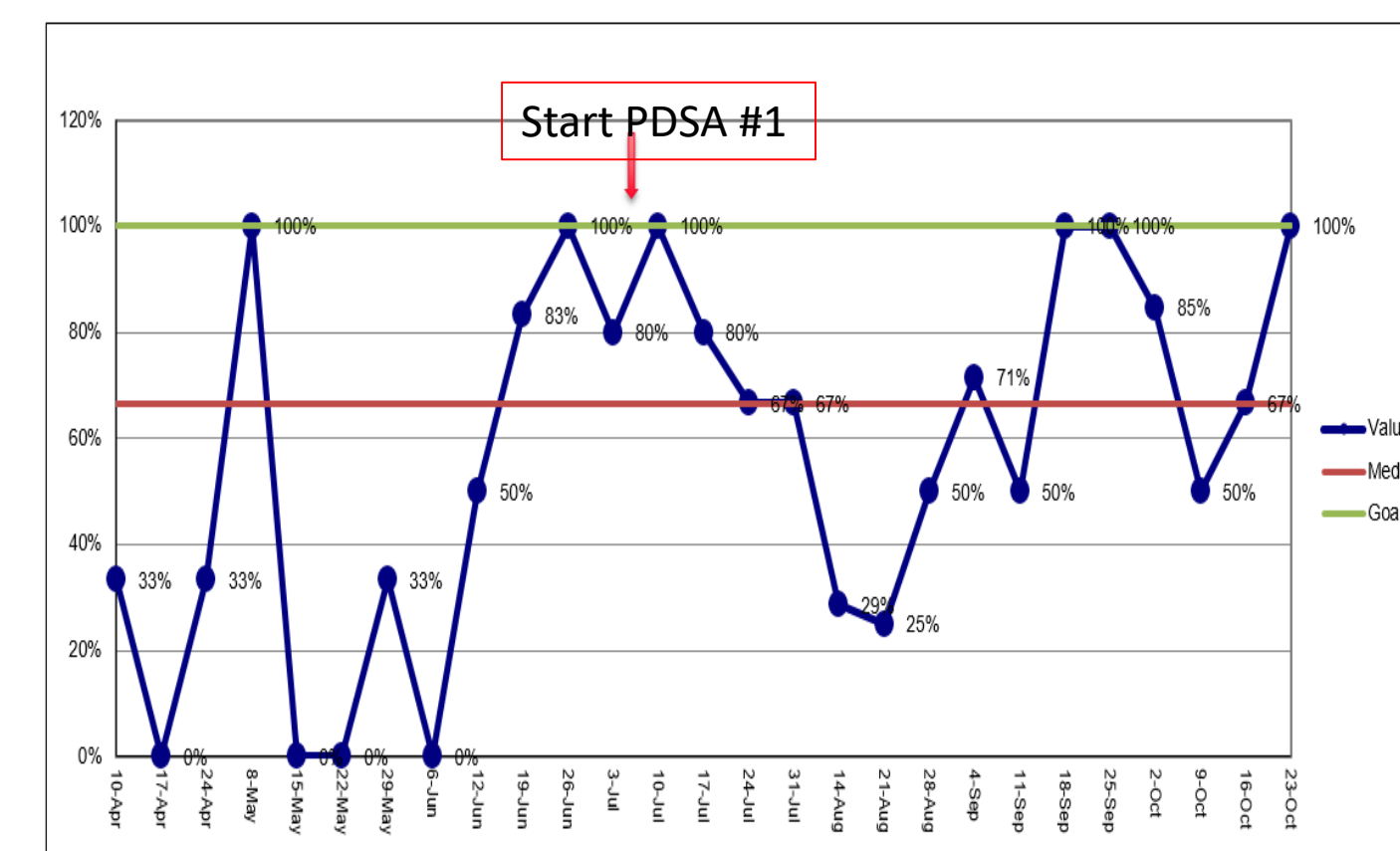
Balancing Measure: Low conversion rate from DS23 to inpatient
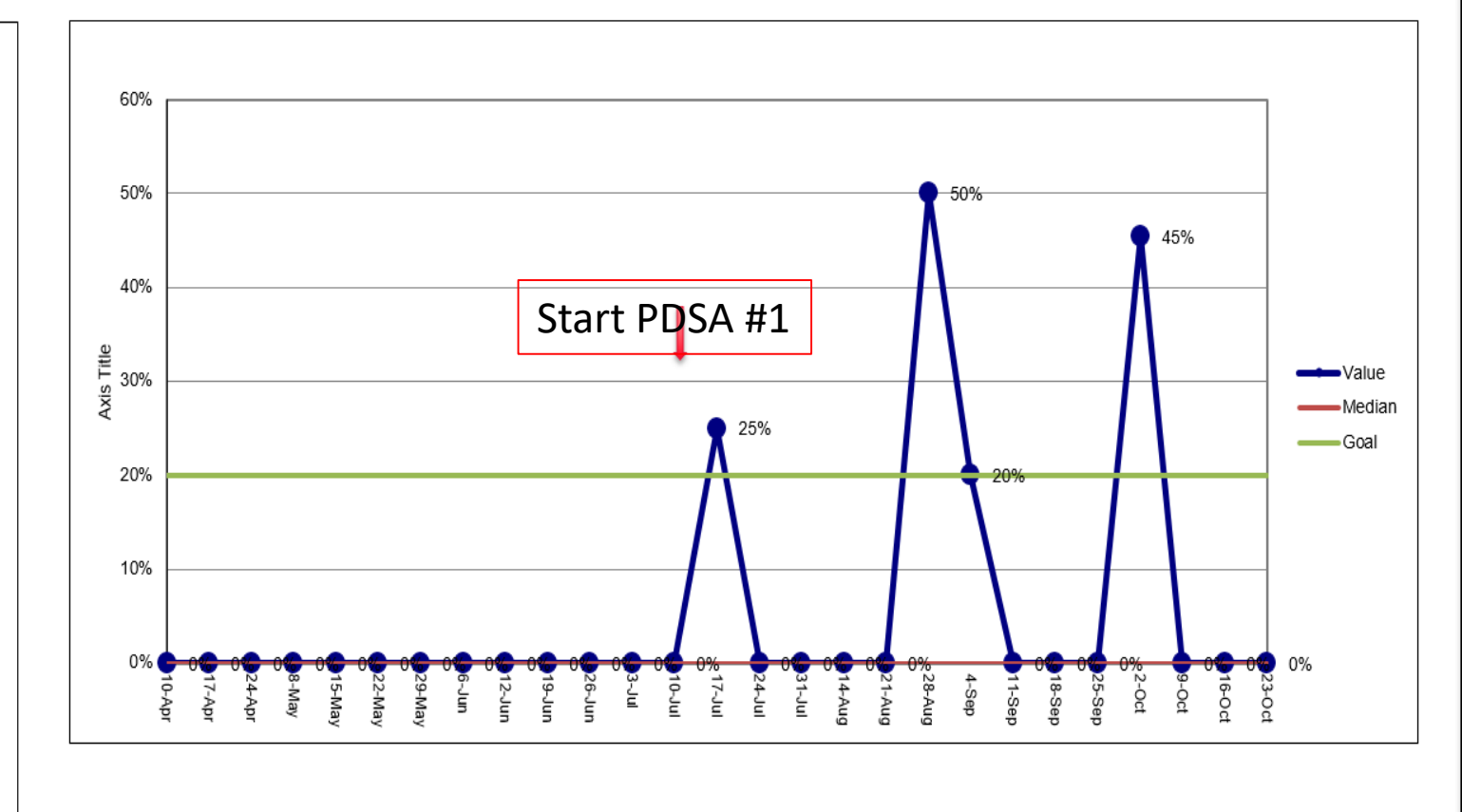
Learning Points

The GS-emergency DS23 workflow for abscesses was started to deliver good quality clinical care to patients and should be offered to all eligible patients.
Our QIP has shown improvement in recruitment into the workflow. Although we did not achieve our target, the target was set at a very high level as the aim of our PDSA cycle #1 was to refine the workflow and change current culture. The increasing number of patients recruited in the workflow shows that there's increasing acceptance of this new workflow.

Furthermore, we have shown benefits of
1. Reduced LOS
2. Reduced cost
3. Reduce burden on inpatient beds

Summary of Estimated Impact due to Implementation of New Abscess Clinical Workflow

Successful DS23 Shift	7 Months Apr - Oct 2019	12 Months Annualised
Patient Cases	73	125
Patient Days Avoidance	180	309
Total Cost Avoidance	-$200K	-$343K
ALOS related	-$110K	-$188K
OT-Duration related	-$56K	-$96K
Investigations related	-$14K	-$24K
Others	-$21K	-$36K
Cost Avoidance per Patient Case	-$2.7K	
Cost Avoidance per Patient Day	-$1.1K	
Bill Reduction (After Subsidy) per Patient Case	-$1.1K	
Bill Reduction (After Subsidy) per Patient Day	-$0.4K	

Other additional benefits include
1. Reduced unnecessary investigations and antibiotics use due to standardized pathway & EPIC smarttexts
2. Early nurse-led discharge as discharge papers and dressing were completed in EOT by MO and patient is given information leaflet on wound care upon discharge
3. Reduced workload on surgical HOs as they are not involved in management of these patients
4. Reduced workload of EMD nurse as they no longer need to transport patient to ambulatory ward as drip was only started when patient is in DS-23

Most importantly, we learnt that to increase recruitment into a new workflow, we need to change culture and mindset of the end user. In order to do that, all parties must believe in the change and benefits it can bring to the patient.