

Mission Statement

To increase the percentage of patients mobilised on postoperative day 0 from 3.8% to 50% for individuals undergoing elective colorectal surgery

Team Members

	Name	Designation	Department
Team Leader	Tan Wen Yin, Ferlyn	Senior Physiotherapist	Physiotherapy
	Adeline Chi Hui Jia	Senior Physiotherapist	Physiotherapy
	How Kwang Yeong	Senior Consultant	General Surgery
Members	Norafida Bte Ismail	Nurse Clinician	Nursing
	Kong Lan Pei	Senior Nurse Clinician	Nursing
	Kunjuraman Suvuseni	Senior Nurse Manager	Nursing
	Wang Bin	Senior Coordinator	General Surgery

Evidence for a Problem Worth Solving

In Tan Tock Seng Hospital (TTSH), Enhanced Recovery After Surgery (ERAS) was first introduced in 2018 and has been adopted as the standard of care for all patients undergoing elective colorectal surgeries. Early mobilisation on post-operative day (POD) 0 is a key element of ERAS which is carried out collaboratively by physiotherapists and nurses. According to ERAS guidelines, it is recommended that patients undergo early mobilisation on the same day of surgery as it has been shown to be both safe and beneficial, reducing hospital length of stay and facilitating earlier return to premorbid function. However, adherence to postoperative mobilisation on POD 0 has been poor, leading to low compliance rates.

Current Performance of a Process

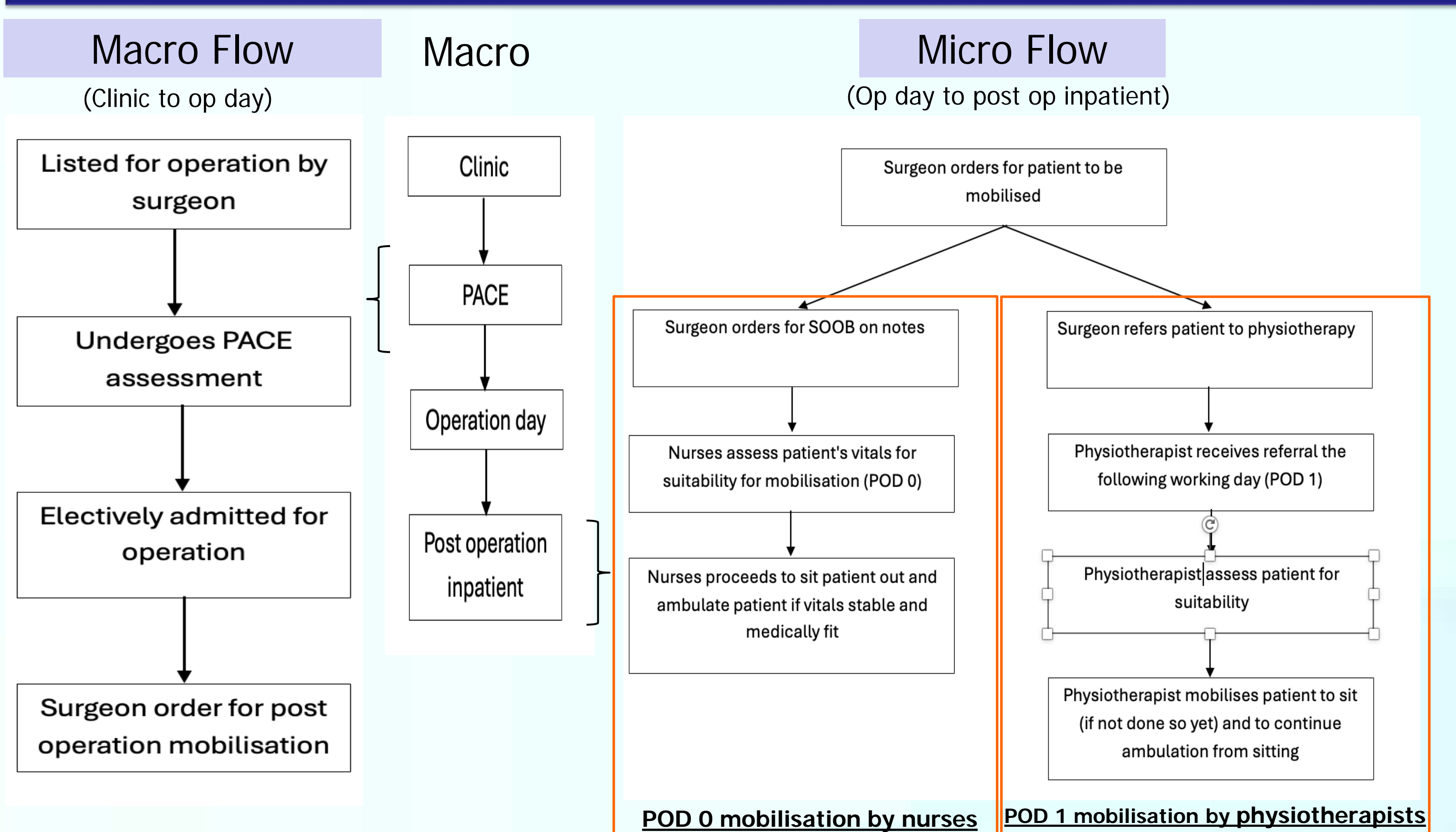
POD 0 mobilisation rates



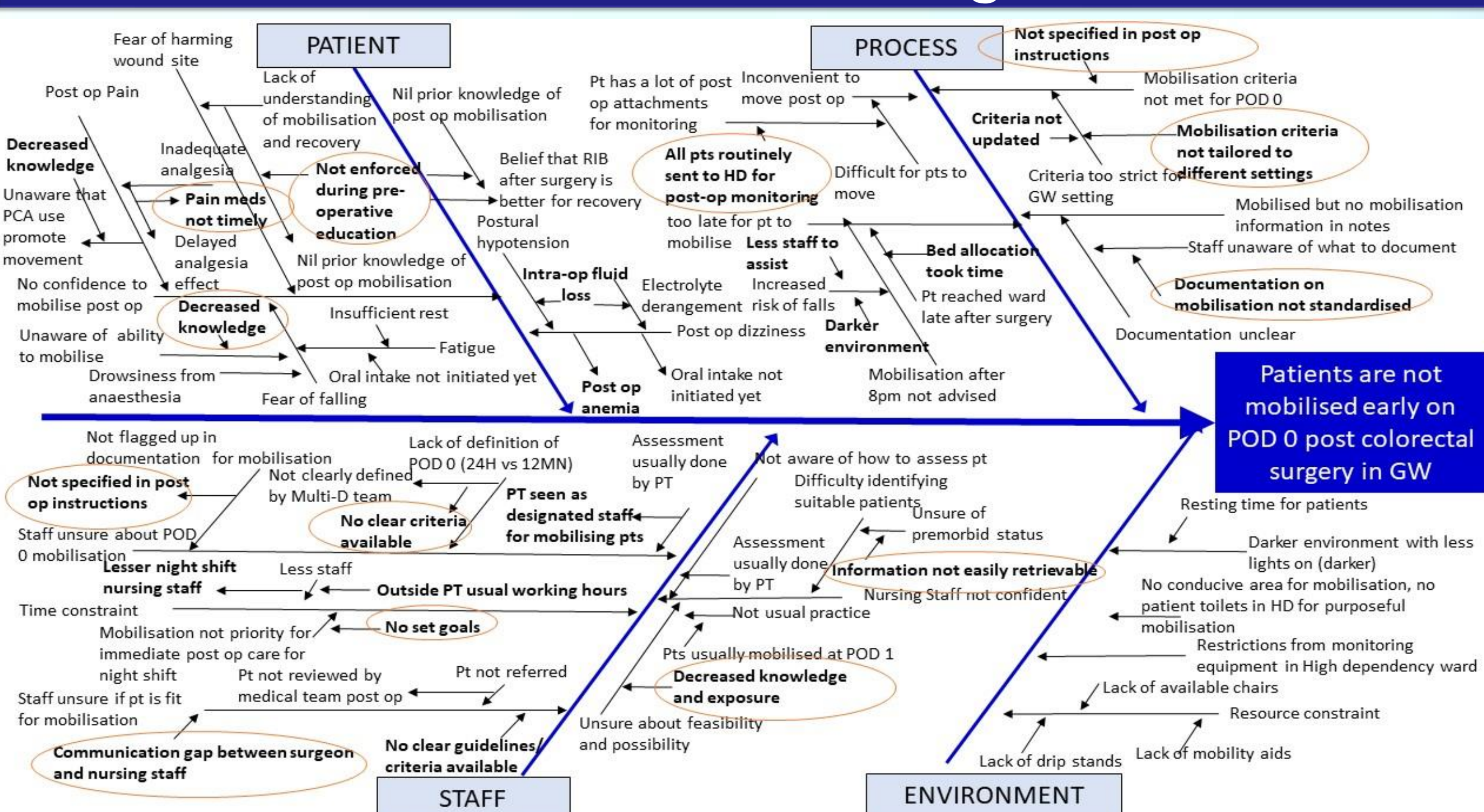
POD 0 mobilisation rates since ERAS implementation

	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
No. of eligible pts	5	2	12	15	13	7
No. of pts mobilised	0	0	1	0	1	1
% pts mobilised	0.0%	0.0%	8.3%	0.0%	7.7%	14.3%

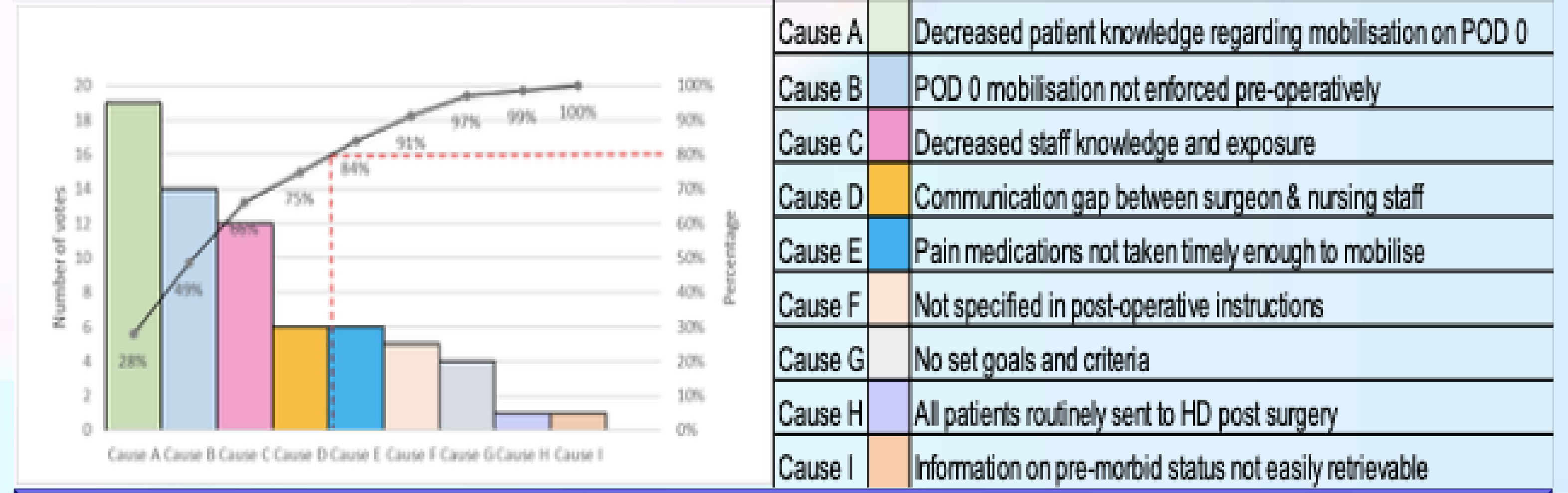
Flow Chart of Process



Cause and Effect Diagram



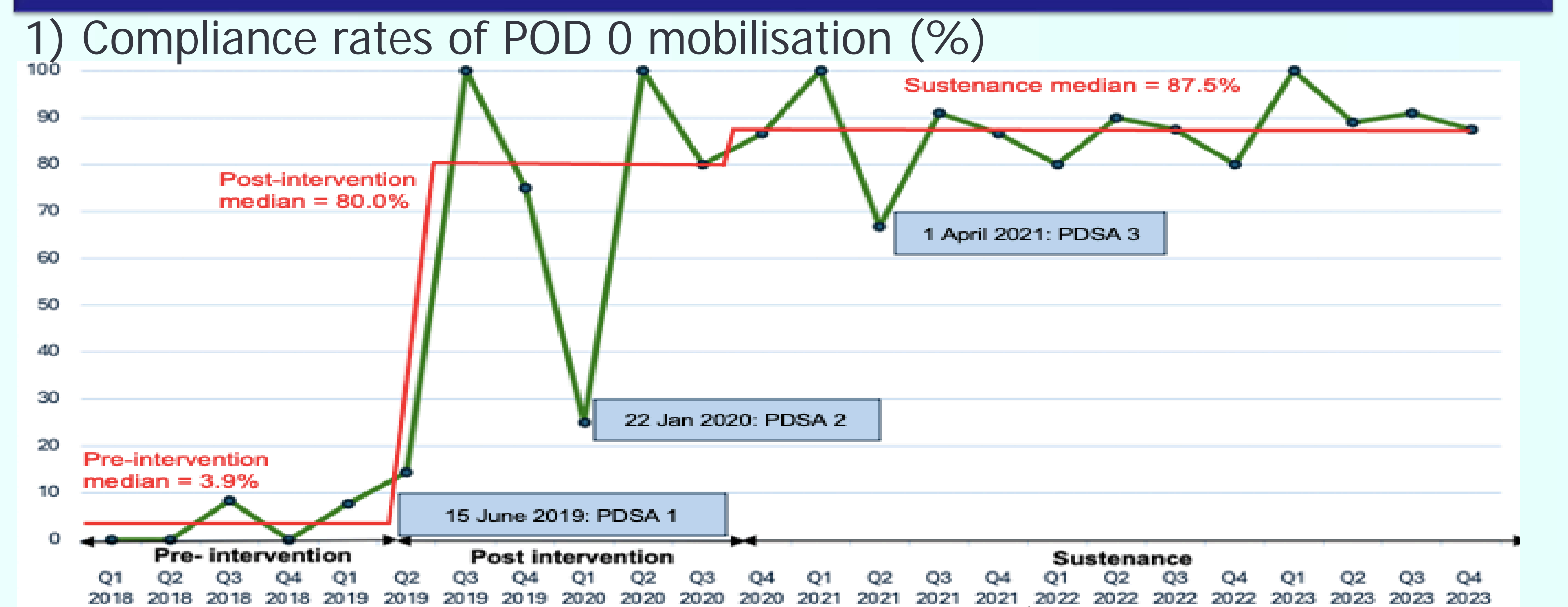
Pareto Chart



Implementation

Problem	Intervention	Date of implementation
Cause A: Decreased patient knowledge regarding postoperative mobilisation	PDSA 1A: Preoperative patient education reinforcing importance of postoperative early mobilisation	15 June 2019
Cause B: POD 0 mobilisation not enforced pre-operatively	PDSA 1B: Reinforcement of postoperative mobilisation by medical team during postoperative review	15 June 2019
Cause C: Lack of staff knowledge and exposure	PDSA 1C: Surgeons mobilising patients to showcase feasibility	15 June 2019
Cause D: Communication gap between surgeons and nursing staff	PDSA 1D: Setting up common communication platform channel via TigerConnect for ease of flagging patients	15 June 2019
Closure of GS wards with reshuffling of nursing staff during COVID	PDSA 2: On-the-job training of nursing staff with updated protocols and condensed mobilisation workflow	22 Jan 2020
Lack of documentation indicating mobilisation of patients identified	PDSA 3: Revising nursing documentation template	1 April 2021

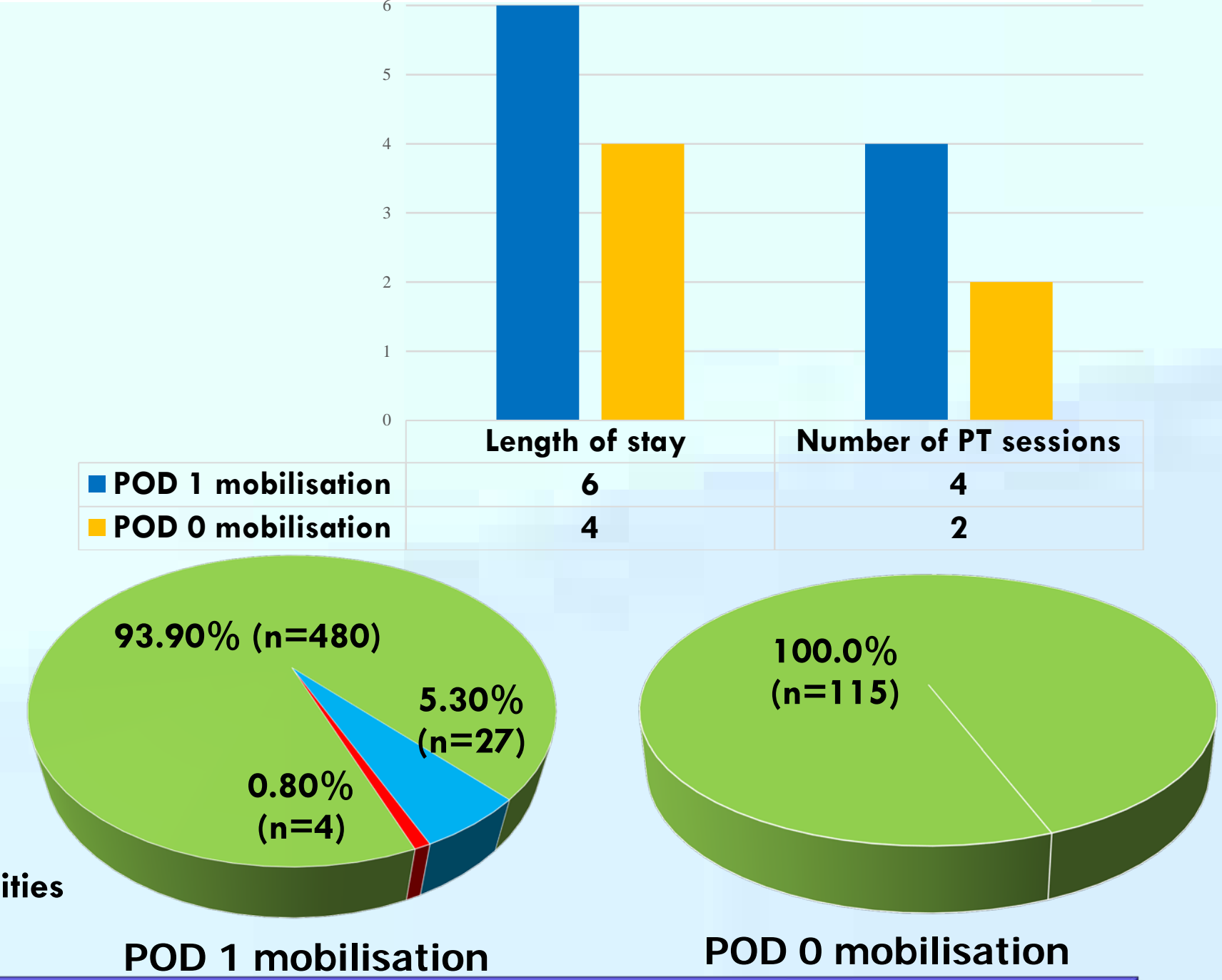
Results



1) Compliance rates of POD 0 mobilisation (%)

2) Primary outcomes

- Reduction in hospital LOS from 6 (IQR=9) to 4.0 (IQR=3.0), p<0.01
- Reduction in number of PT sessions from 4.0 (IQR=4.0) to 2 (IQR=2.0), p<0.01
- Higher proportion of patients were discharged home 93.9% vs 100%, p=0.026



Cost Savings

	Pre-implementation	Post-implementation	Cost savings
Number of PT sessions	4	2	(No. of PT sessions saved) x (PT charges for 1 session) = 2 x \$126.4 = \$252.88
Hospital LOS	6	4	(No. of hospital LOS saved) X (Inpatient daily ward charges) = 2 x \$750 = \$1500
Cost savings to 1 patient:			\$252.88 + \$1500 = \$1752.88
Estimated annualised cost savings to patients:			\$1752.88 x (Average no. of elective colorectal patients/year) = \$1752.88 x 200 = \$350,576

Problems Encountered

- Nurse-led mobilisation on POD 0 is a novel approach
- Q1 2020: COVID measures instated, with repurposing of GS wards and reshuffling of manpower
- Q1 2021: Inaccurate documentation leading to discrepancies in patients mobilised and mobilisation documented

Strategies to Sustain

- Surgeons took the lead in mobilising patients to demonstrate feasibility, boosting confidence of both nurses and patients
- Consistent tracking of compliance rate
- Regular huddles to facilitate discussion of challenges encountered, troubleshooting potential pitfalls and compliance issues, as well as finetuning the existing workflow