

Project Title

Improvement On MRI Sedation Workflow

Project Lead and Members

Project lead: Kelvinder Kaur and Waheeda Ahmad

Project members: Franco Leow, Ong Kian Boon

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group(s) Involved in this Project

Medical, Nursing, Operations

Aims

Implement a smoother and efficient to improve the % of scans completed from 60% to 100% by Jun 23.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

All Ortho doctor assigned are **ready to serve** when patient arrives. The standardising of care can **improve** patient care. Patient **satisfaction rate increase** allowing timely treatment and **Reduce wastage of MRI slots**. Thus, **providing smoother workflow**, alleviating the burden on the staff and **promote efficiency**.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Quality Improvement (Job Effectiveness)

Keywords

MRI, Sedation, Slots, Scans

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IMPROVEMENT ON MRI SEDATION WORKFLOW

- ✓ SAFETY
- ✓ PRODUCTIVITY
- ✓ QUALITY
- ✓ COST
- ✓ PATIENT EXPERIENCE

MEMBERS: KELVINDER KAUR (CO-LEAD), WAHEEDA AHMAD (CO-LEAD), FRANCO LEOW, ONG KIAN BOON

Define Problem, Set Aim

Problem/Opportunity for Improvement

Variation in care practices to patients who needs MRI Sedation. Standardization of care using evidence-based medicine has shown to improve patient satisfaction with no wastage of MRI Slots, smoother workflow and promoting efficiency. In Apr 2023, 12 out of 20 scans (60%) could be completed with sedation done (8 scans had to be canceled because Drs were not available).

Aim

Implement a smoother and efficient to improve the % of scans completed from 60% to 100% by Jun 23.

Establish Measures

Outcome Measure: % of scans completed

Numerator: No. of patients with sedation done by Dr and MRI completed successfully

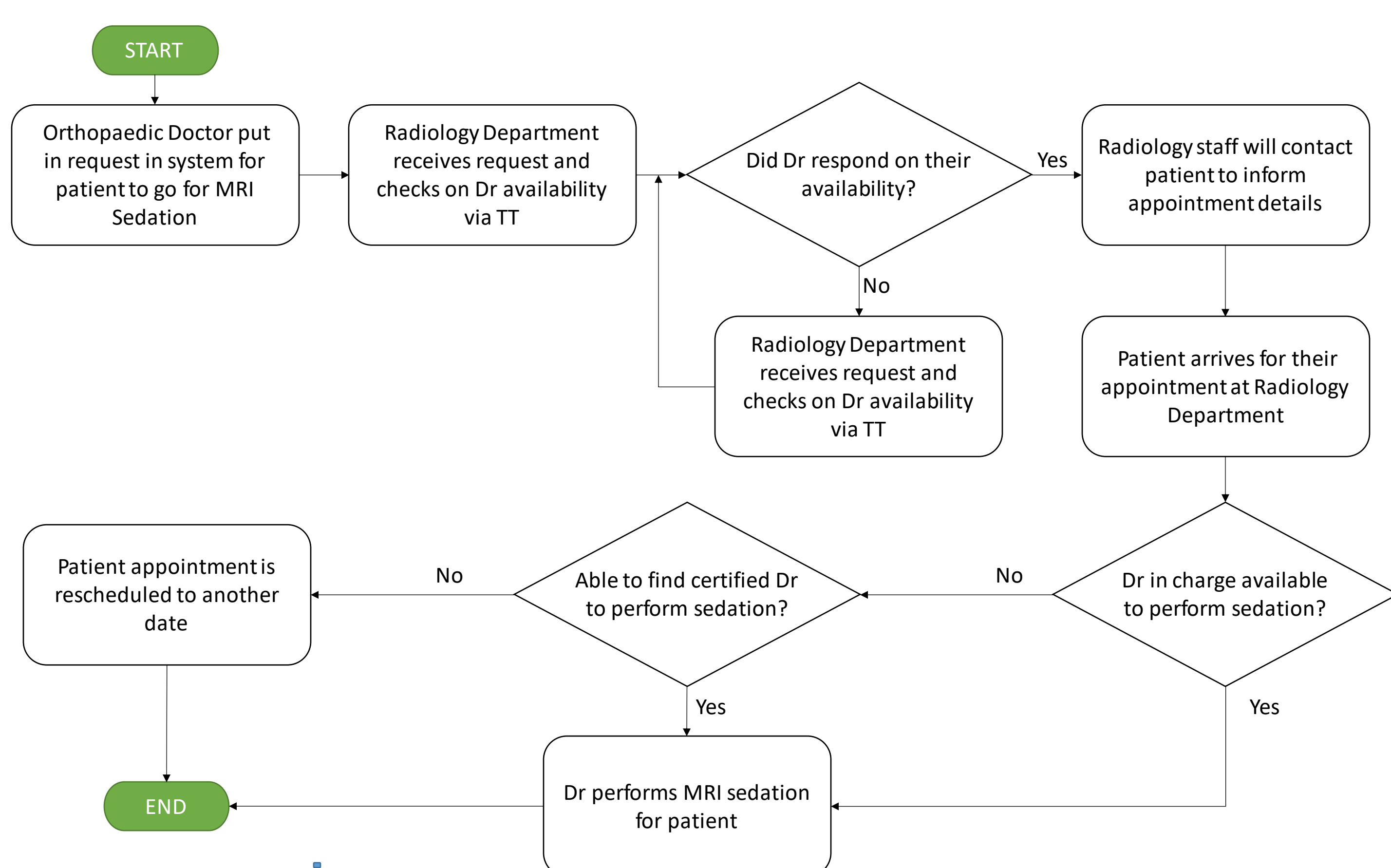
Denominator: No. of patients planned to do MRI sedation

Baseline Performance for Apr 23

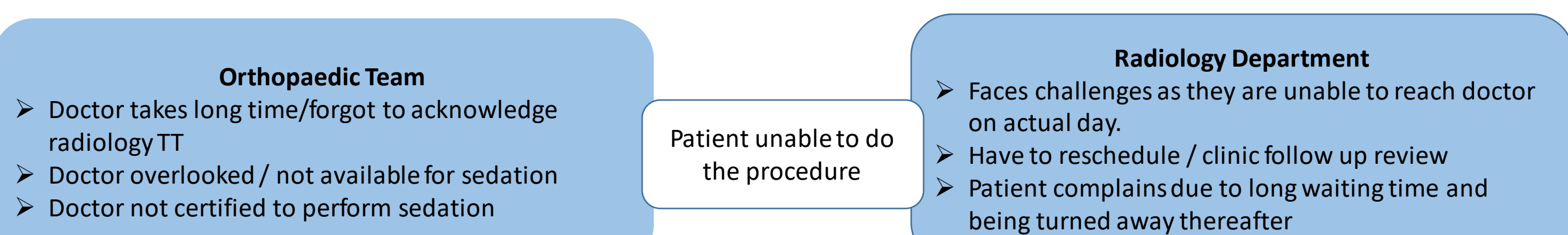
12 patients completed / 20 patients planned for MRI sedation = 60%

Analyse Problem

Current Process



Root Cause Analysis



Select Changes

Probable Solutions

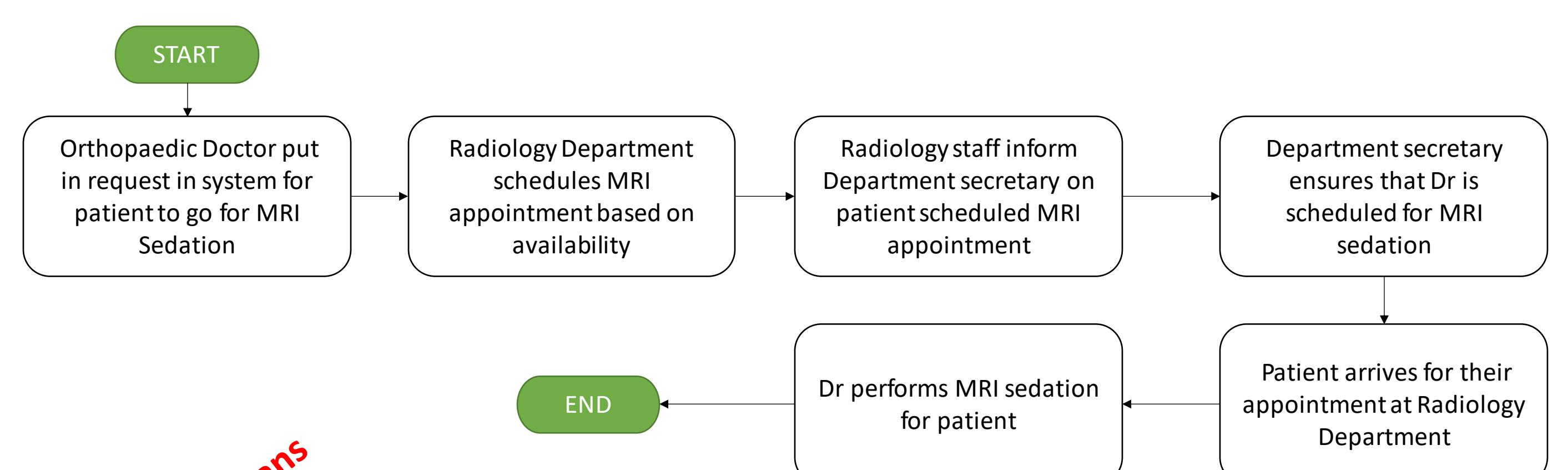
The Root Cause Analysis showed that there were many contributing factors. Hence the solution had to be summarized in the table below:

Category	Root Cause	Potential Solution
Orthopaedic Department	➤ Doctor not certified to perform sedation	➤ Department Secretary ensures all ortho Drs are 100% trained and certified within first week of posting.
	➤ Doctor takes long time/forgot to acknowledge radiology TT	➤ Department Secretary ensures assigned Drs are available on the actual day .
	➤ Doctor overlooked / not available for sedation	
Radiology Department	➤ Faces challenges as they are unable to reach doctor on actual day.	➤ Radiology Department will activate doctor who is assigned.
	➤ Have to reschedule / clinic follow up review	➤ Meantime patient is adequately prepared for the procedure. ➤ All staff involved in patient care will have a clear role and responsibilities .

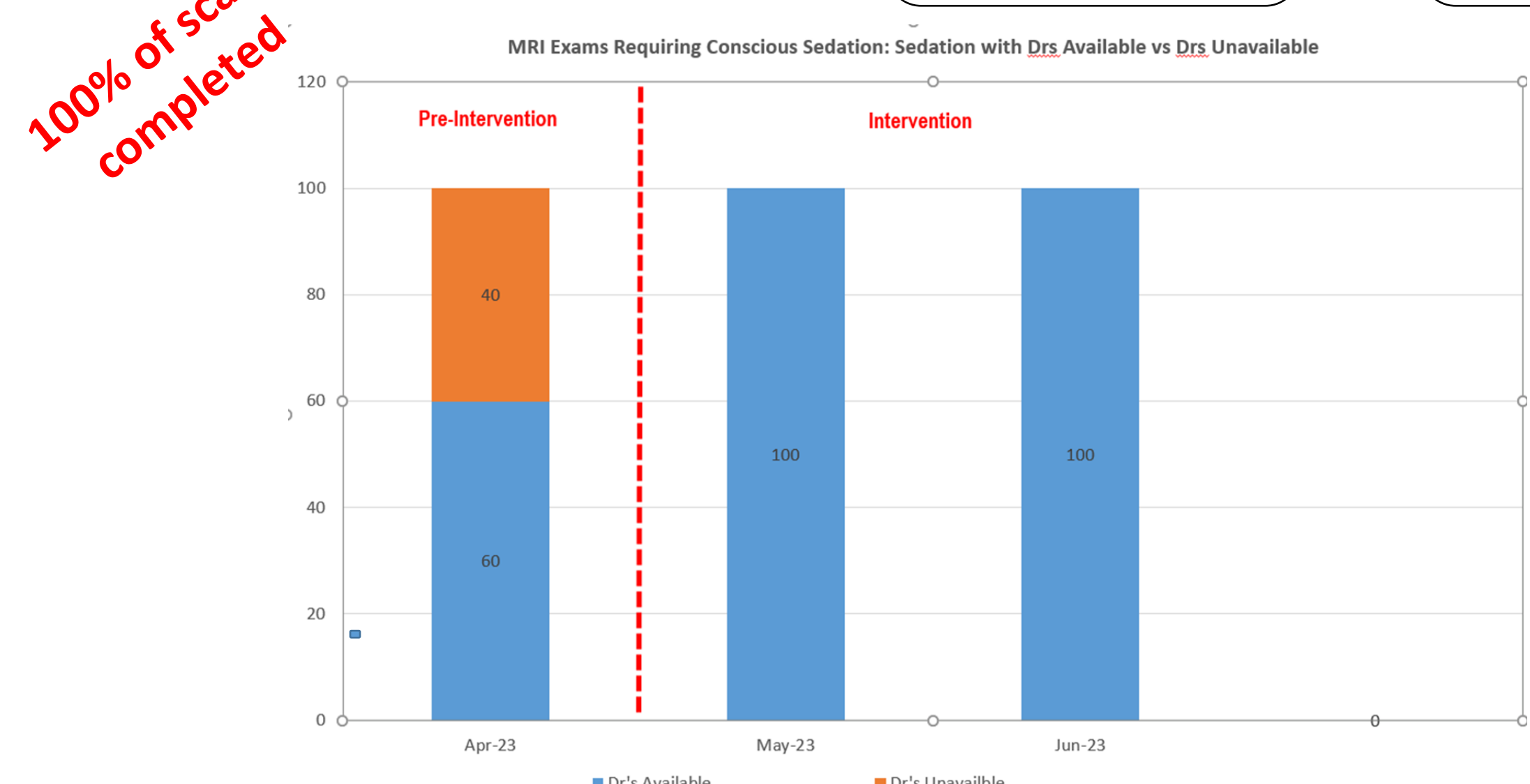
Test & Implement Changes

How do we pilot the changes? What are the initial results?

CYCLE	PLAN	DO	STUDY	ACT
1	Aim to have 100% Ortho Drs trained and certified within first week of training.	Department Secretary ensures all ortho Drs are 100% trained and certified . Ensure Drs attend the online course and send me their result slip via email.	100% of Ortho Drs were eventually completed the module and got certified.	Adopt the change On top of the Drs who are trained and certified, Department secretary will also ensure that Drs are trained and certified within first week of posting.
2	Aim to have 100% scans done for those patients who are scheduled with the new workflow.	Test new workflow where schedule radiology MRI appointment and department secretary ensures that Drs are available on the actual day.	A positive increase in rate of scans done for those patients are scheduled for their appointments from May till June 2023 as Orthopaedics takes the bulk 80% of the workload.	Adopt and Scale to General Medicine and General Surgery as they take the other 20% of the workload.



100% of scans completed



Spread Changes, Learning Points

Spread Change

We intend to spread to General medicine and General Surgery Department to main positive changes. Timely treatment results in Win-Win situation for both patients and hospital staff.

Learning Points

- All Ortho doctor assigned are **ready to serve** when patient arrives
- Standardising care can **improve patient care**
- Patient **satisfaction rate increase** allowing timely treatment
- **Reduce wastage of MRI slots**
- **Smoother workflow**, alleviating the burden on the staff and **promote efficiency**.