

Project Title

Provide Safe Flexible Endoscope from Storage Cabinet

Project Lead and Members

Project lead: Zhang Rong

Project members: Wang Caihong, Ma Xueyun, Xing Lijia, Fan Ruhui, Aramie, Rosidah Idris

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Nursing

Applicable Specialty or Discipline

Endoscopy

Aims

The Endoscopy team intends to achieve less than 20% positive MSC result by 31/12/2019 for flexible endoscopes during shelf life undergoing MSC because we want to ensure endoscope is safe for patients use.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

QI tools enable clinical staff work out effective problem-solving skills to provide safe medical equipment for patient use.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Value Based Care, Safe Care, Quality Improvement, Lean Methodology

Keywords

Safe Endoscope, Microsurveillance Culture Rate

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PROVIDE SAFE FLEXIBLE ENDOSCOPE FROM STORAGE CABINET

MEMBERS: ZHANG RONG, WANG CAIHONG, MA XUEYUN, XING LIJIA, FAN RUHUI, ARAMIE, ROSIDAH IDRIS

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

Define Problem, Set Aim

From January 2018 to May 2018, the mean positive microsurveillance culture (MSC) rate of flexible endoscopes during cabinet storage reached 56% which was higher than past result (20%). This imposed high risk on patients undergone endoscopy procedures as those endoscopes were deemed to be ready for use.

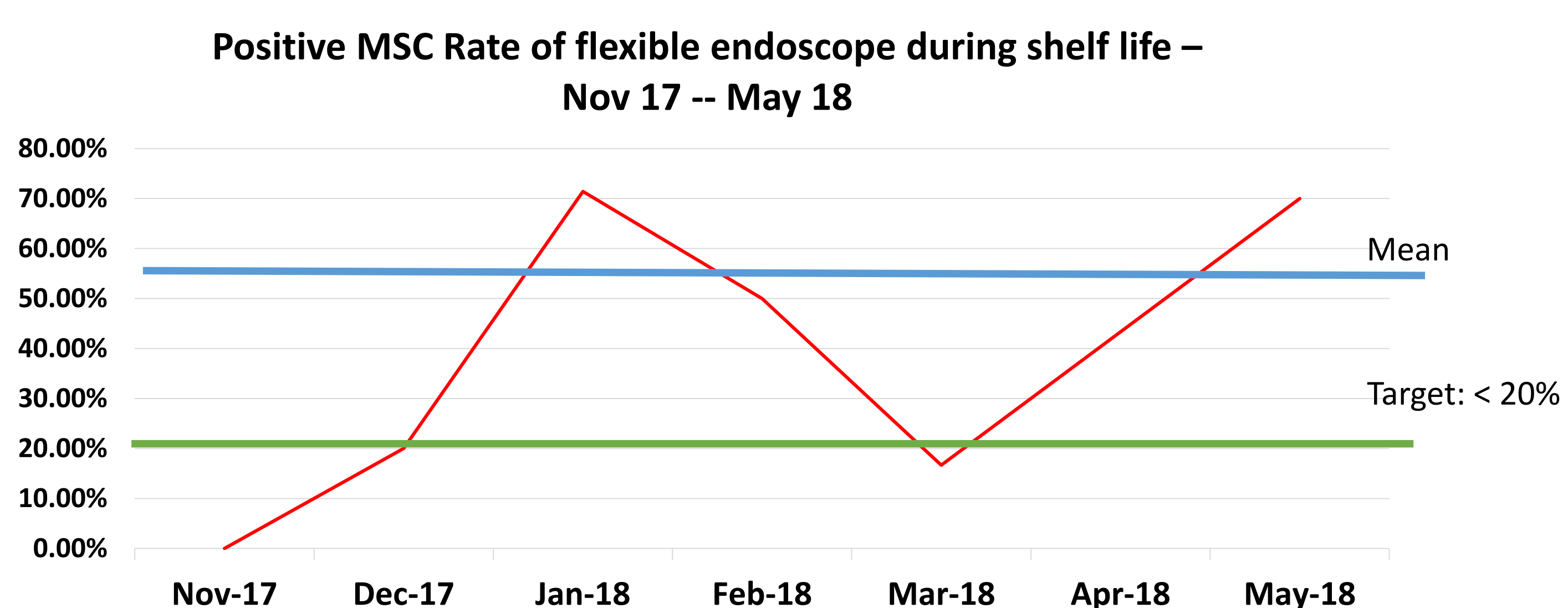
Aim

The Endoscopy team intends to achieve less than 20% positive MSC result by 31/12/2019 for flexible endoscopes during shelf life undergoing MSC because we want to ensure endoscope is safe for patients use

Establish Measures

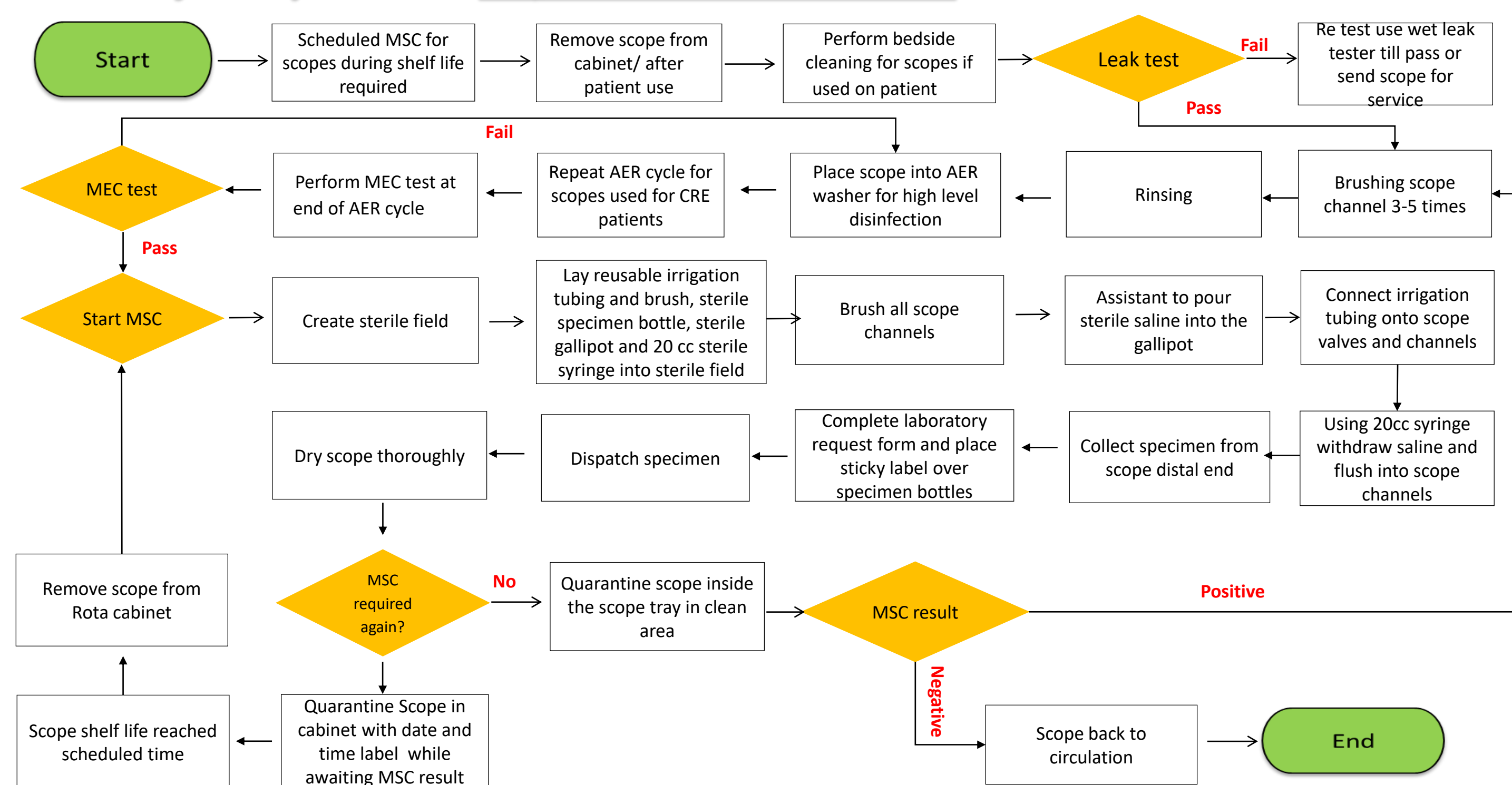
What was your performance before interventions?

Outcome measure:

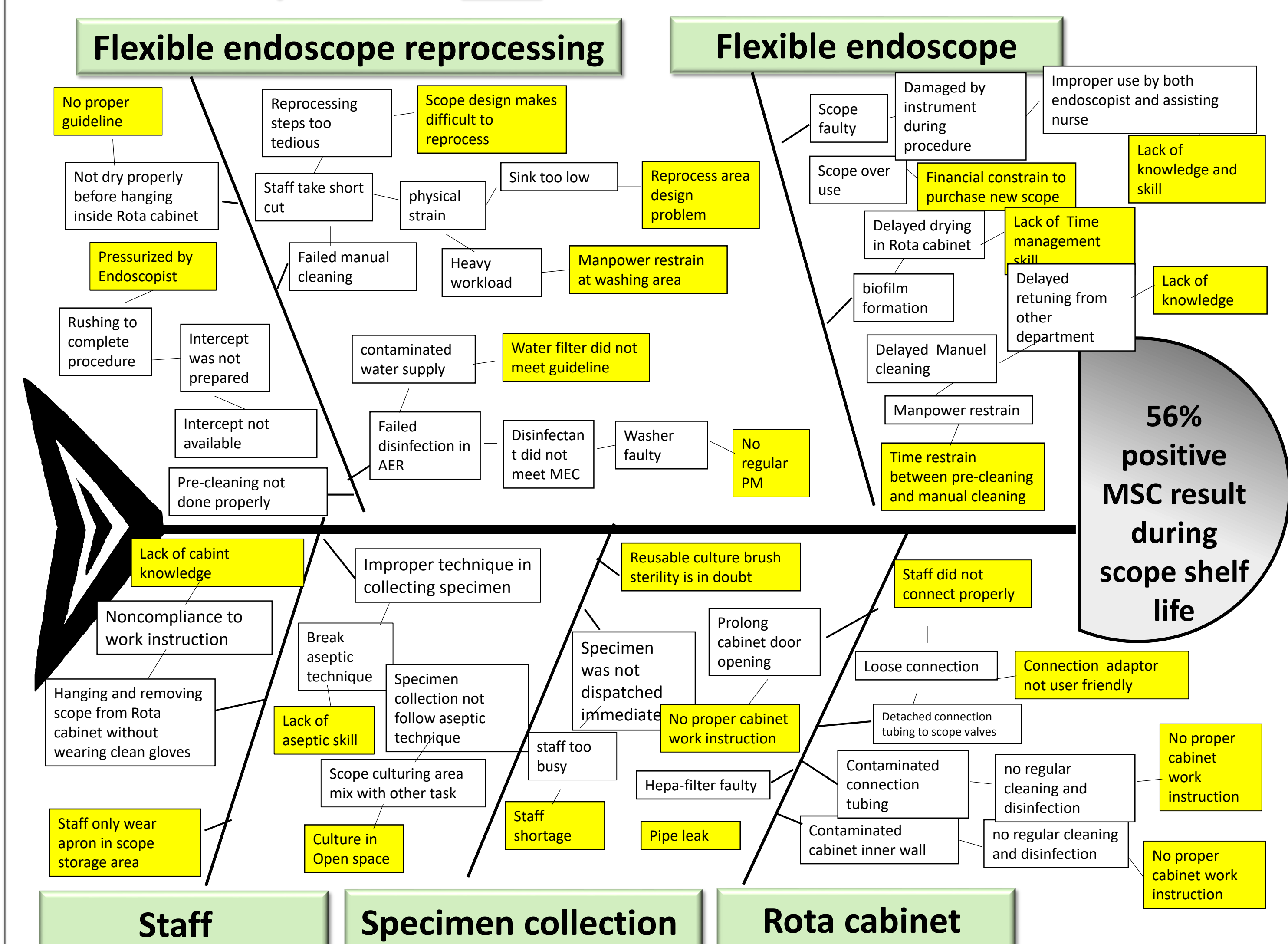


Analyse Problem

What is your process before intervention?



What are the probable root causes?



Select Changes

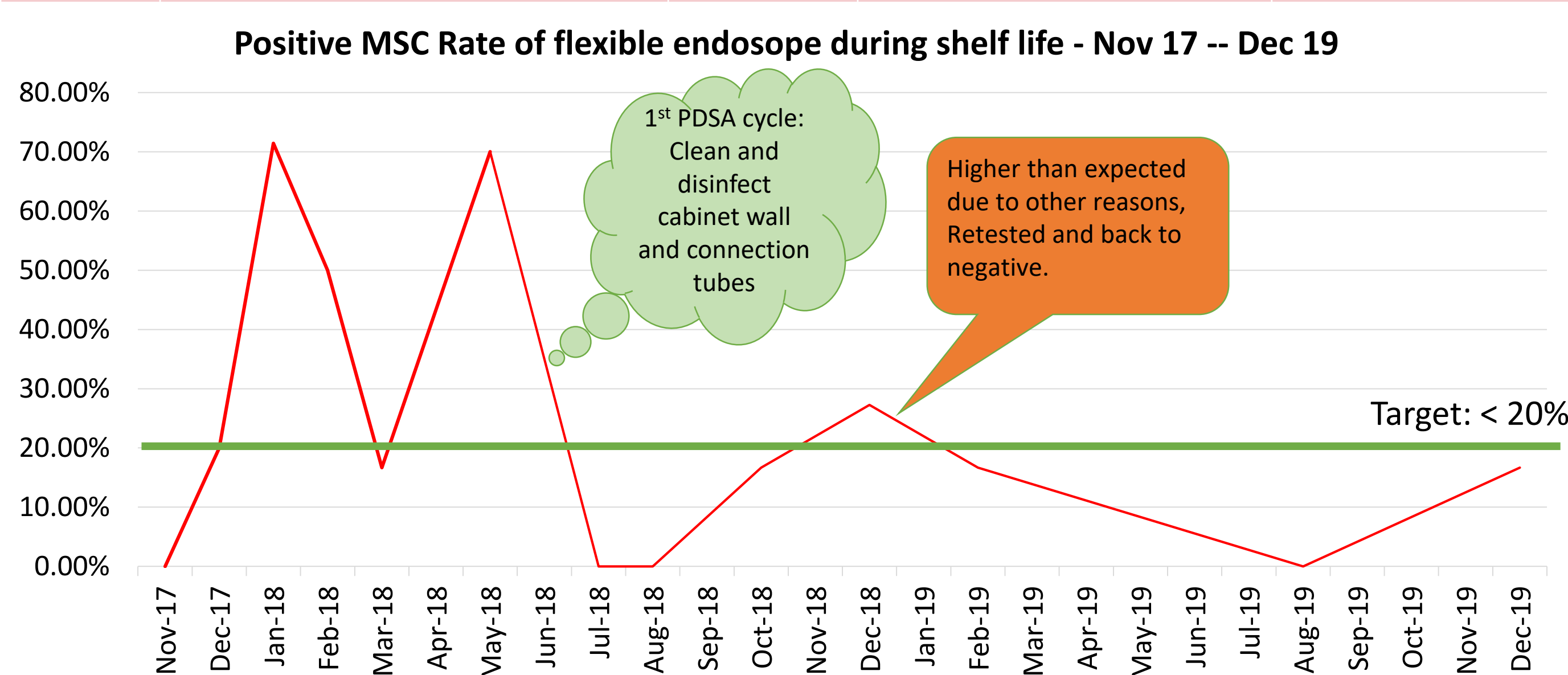
What are all the probable solutions? Which ones are selected for testing?

Root Cause	Potential Solutions	Root Cause	Potential Solutions
a. No proper guideline in Rota cabinet usage	1a Wear cap and clean gown at scope storage area	b. Reusable culture brush sterility was in doubt	1b Stop using reusable culture brush
	2a Weekly using disinfectant wipe to clean cabinet inner wall		2b Invest disposable sterile culture brush
	3a Cabinet tubing Monthly cleaning and place into Parasafe to go through high level disinfection		3b
	4a Educate staff on thorough scope drying		4b
	5a Buy new and advanced drying cabinet		5b
	6a		6b

Test & Implement Changes

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

CYCLE	PLAN	DO	STUDY	ACT
1	<ol style="list-style-type: none"> All staff work at scope storage area must wear cap and clean gown & gloves. Perform weekly Rota cabinet inner wall disinfection with alcohol wipes. Conduct monthly Rota cabinet connection tubing cleaning and HLD with Parasafe. Educate all staff on thorough drying scopes before hanging inside cabinet during roll call. Stop using reusable sterile brush for MSC specimen collection. 	All plans were carried out.	The initial positive MSC result showed dramatic drop from Jul 18 till Oct 18. However, positive MSC from scope during shelf life increased again in Dec 18. Affected scopes went through second round of testing and showed negative MSC during storage. This indicated other factors might contribute to the positive MSCs. The subsequent MSC result reached target level.	All changes were adopted in NTFGH endoscopy. Weekly cabinet inner wall cleaning and monthly connection tube HLD are necessary to provide safe scopes for patient use. All key stake holders were satisfied despite increased workload for reprocessing staff. In addition, 2 monthly scope MSC during shelf life adjusted to 6 monthly in view of the stable result.



Spread Changes, Learning Points

What are/were the strategies to spread change after implementation?

Rota cabinet cleaning and disinfection are critical to render safe endoscopes for patient use during shelf life. The changes are included in the current flexible endoscope reprocessing policy. The team was invited to share the project in the SGNA, American 2020 and was planned to share in the local conference this year.

What are the key learnings from this project?

QI tools enable clinical staff work out effective problem-solving skills to provide safe medical equipment for patient use.