CENTRE FOR HEALTHCARE INNOVATIONS

CHI Learning & Development (CHILD) System

Project Title

Reduce Positive Endoscope Microsurvilience Culture (MSC) result

Project Lead and Members

Project lead: Zhang Rong

Project members: Wang Cai Hong, Liu Guoai, 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 by 31/03/2020 for flexible endoscope undergoing MSC because we want to provide safe endoscope for patient use.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below



CHI Learning & Development (CHILD) System

Lessons Learnt

Positive endoscope MSC is contributed by multiple causes. We should identify the main root causes and work on current evidence at affordable cost to provide safe equipment for patient use.

Conclusion

See poster appended/below

Project Category

Care & Process Redesign

Quality Improvement, Workflow Redesign

Keywords

MSC (micro-surveillance culture) Rate, Double High Level Disinfection

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REDUCE POSITIVE ENDOSCOPE MSC RESULT

MEMBERS: ZHANG RONG, WANG CAIHONG, LIU GUOAI, FAN RUHUI, ARAMIE, ROSIDAH IDRIS

Define Problem, Set Aim

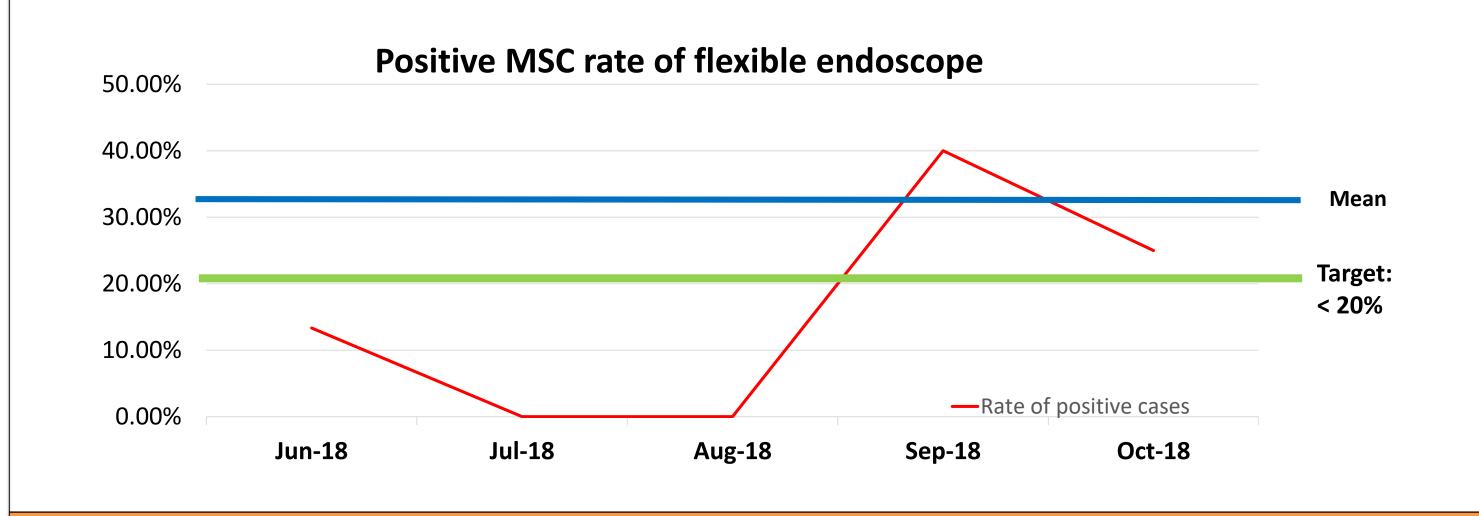
From September 2018 to October 2018, the positive microsurvilience culture (MSC) result of flexible endoscopes reached 32.5% which was higher than existing record (20%). This led to increased risk of endoscope related nosocomial, reduced availability of endoscope circulation, increased cost of repeated MSC and unhappy staff.

Aim

The endoscopy team intends to achieve less than 20% positive MSC by 31/03/2020 for flexible endoscope undergoing MSC because we want to provide safe endoscope for patient use.

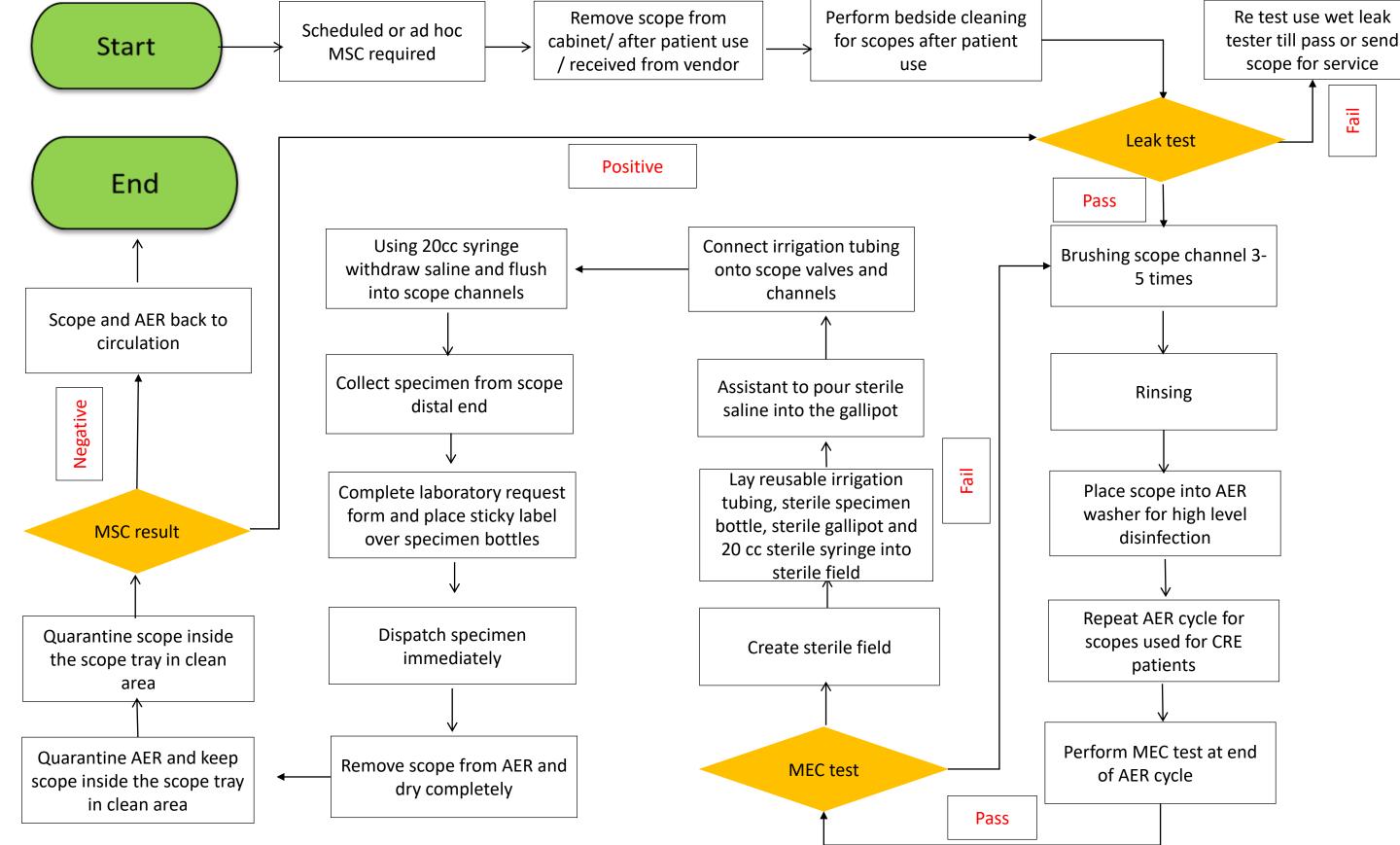
Establish Measures

What was your performance <u>before interventions</u>? Outcome measure:

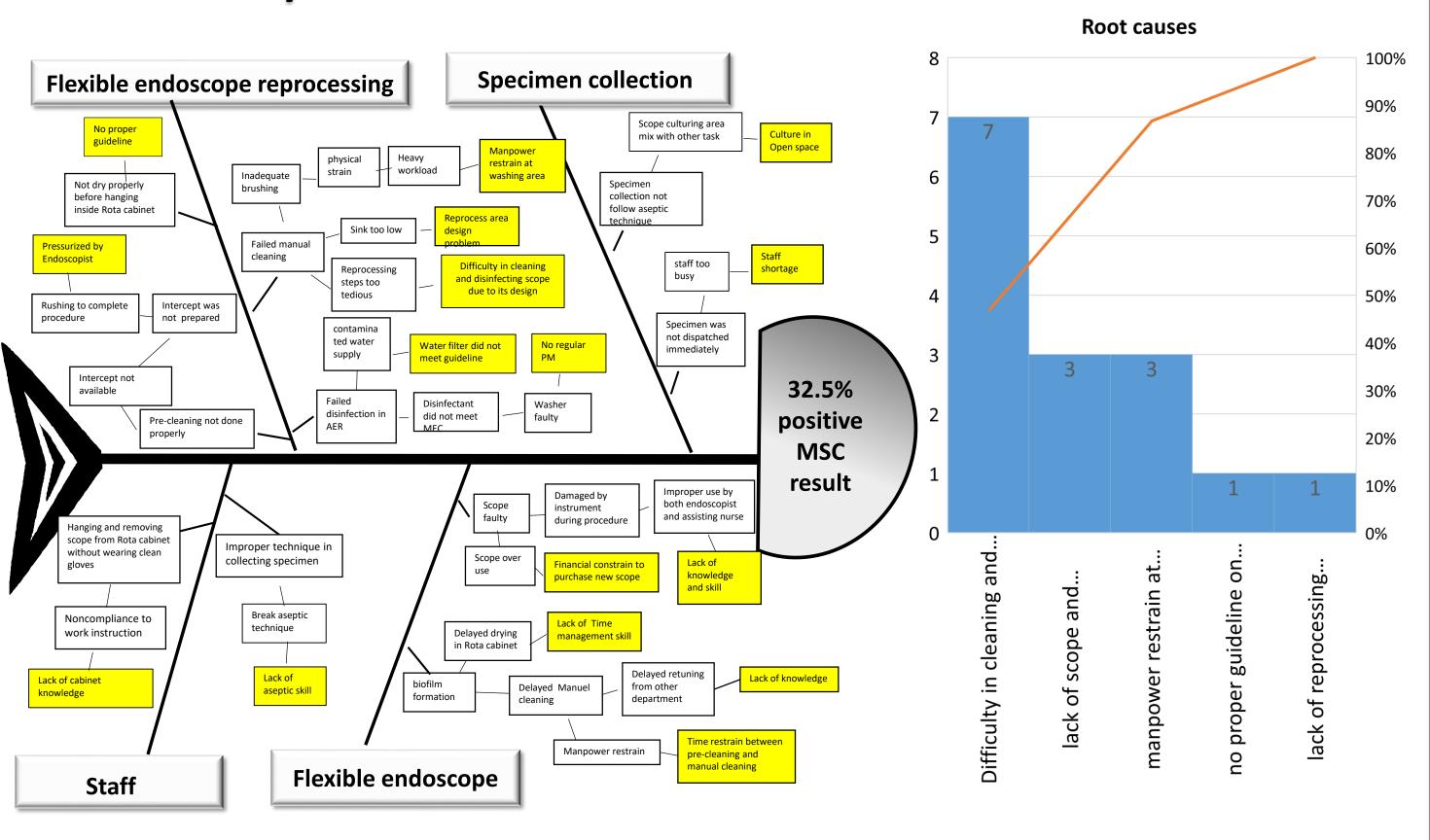


Analyse Problem

Flexible endoscope MSC process (before improvement):



What are the probable root causes?

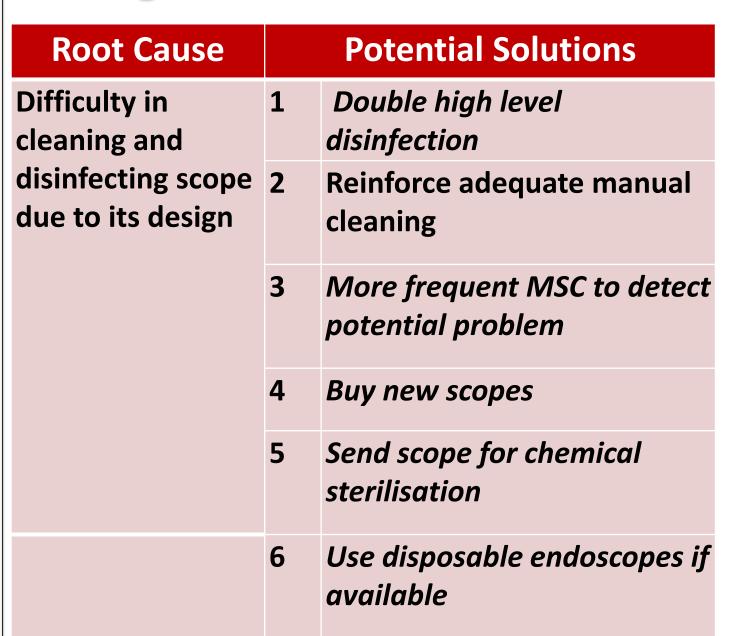


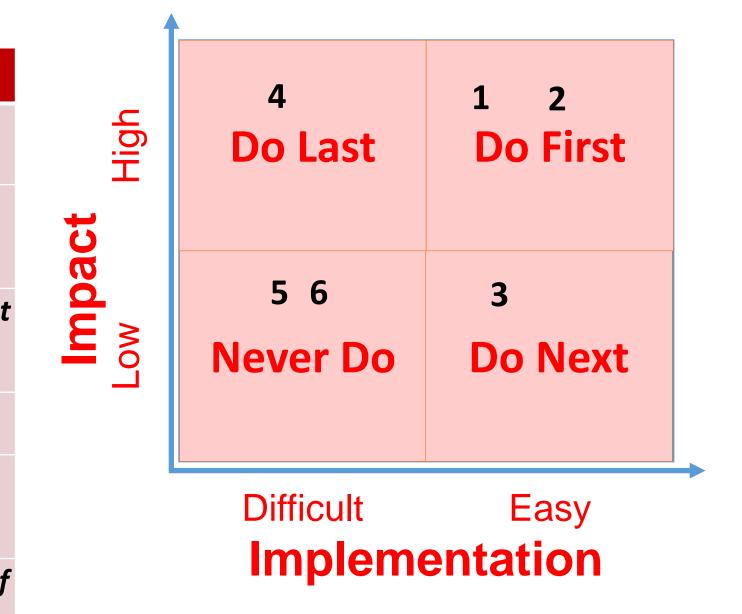


□ PRODUCTIVITY☑ COST□ TEAMWORK□ COMMUNICATION

Select Changes

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

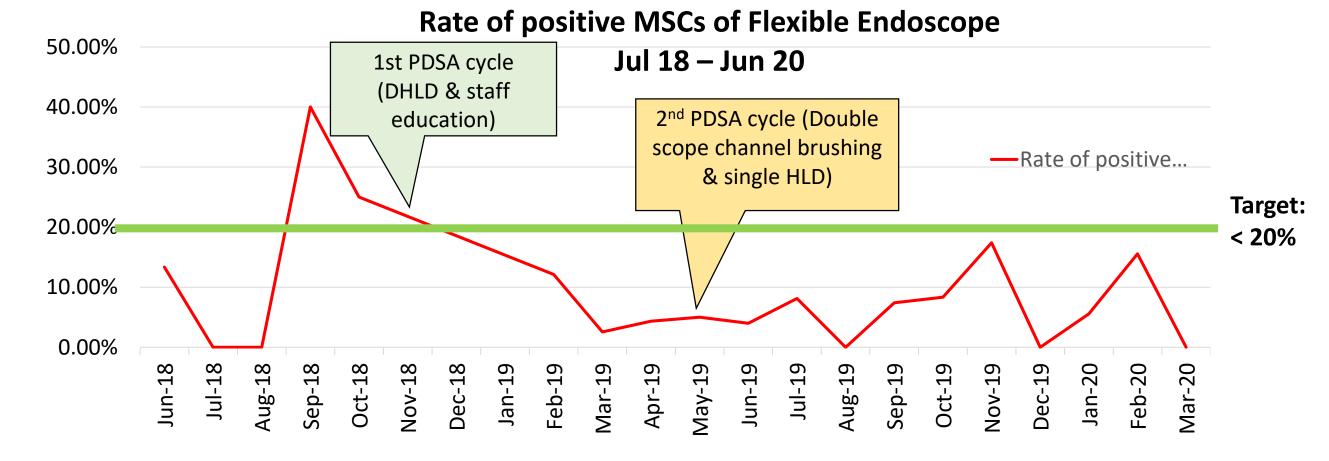




Test & Implement Changes

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

CYCLE		PLAN	DO	STUDY	ACT
1	•	Perform double high level disinfection (DHLD) for endoscopes undergoing MSC Reinforce and educate staff on adequate manual cleaning through roll call, ad hoc audit during endoscope reprocessing	DHLD was carried out for all endoscopes undergoing MSC. Meanwhile, all endoscopy staff were reinforced on proper manual cleaning through roll call. And monthly endoscope reprocessing audit increased to weekly.	Reduced positive MSC rate	DHLD was more effective than single HLD. However, it added workload for reprocessing staff and prolonged AER and endoscope turn around time. More importantly, DHLD increased endoscope reprocess cost, \$\$100 (single HLD) vs \$\$180 (DHLD).
2	cha 3-5	rease endoscopes annel brushing from times to 6-10 times ring manual cleaning	Adapt double brushing and single HLD for all endoscopes undergoing MSC	Comparable positive MSC rate as compared to DHLD	Double endoscope channel brushing is effective to reduce positive MSC. It is more cost effective than DHLD (\$\s\$120 vs \$\\$\$\\$\$\\$\$\\$\$\\$\$\\$\$\\$\$\\$\\$\\$\\$\\$\\$\\$\\$
50.	00%		Rate of positive MSCs st PDSA cycle DHLD & staff	•	oe .



Spread Changes, Learning Points

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

DHLD is included in the latest endoscope reprocessing policy at Jurong campus. Both DHLD and double brushing are the current work instruction in NTFGH endoscopy. The project team was invited for podium presentation at SGNA in the United States, and was planned to share at local conference this year.

What are the key learnings from this project?

Positive endoscope MSC is contributed by multiple causes. We should identify the main root causes and work on current evidence at affordable cost to provide safe equipment for patient use.

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