

## **Project Title**

Expediting Hip Fracture Surgery in COVID Surveillance Patients

## **Project Lead and Members**

Project lead: Dr Amritpal Singh

Project members: Dr Ashish R. Satapathy, Dr Surinder Kaur Pada, Dr Lydia Au, Dr Chen Yongsheng, Dr Kan Yaan Meng, Wong Tze Chin, Fione Gun, Leong Kin Seng, Zarina Ahmad, Joyce Ong

## **Organisation(s) Involved**

Ng Teng Fong General Hospital

## **Healthcare Family Group Involved in this Project**

Medical, Nursing, Healthcare Administration

## **Applicable Specialty or Discipline**

Orthopaedic

## **Project Period**

Start date: April 2020

Completed date: June 2020

## **Aims**

We aim to increase the percentage of patients undergoing hip fracture surgery within 48 hours of Admission Order despite needing COVID surveillance.

## **Background**

See poster appended/below

## **Methods**

See poster appended/below

## **Results**

See poster appended/below

## **Lessons Learnt**

- Further observation of more patients over longer periods is required to assess long-term outcomes of the protocol.
- Strong support from the multidisciplinary team is essential to the smooth and continued functioning of the hip fracture clinical pathway.

## **Conclusion**

See poster appended/below

## **Project Category**

Care & Process Redesign

Quality Improvement, Workflow Redesign, Value Based Care, Functional Outcome, Productivity, Time Saving, Access to Care, Turnaround Time

## **Keywords**

Hip Fracture Surgery, COVID Surveillance

## **Name and Email of Project Contact Person(s)**

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# EXPEDITING HIP FRACTURE SURGERY IN COVID SURVEILLANCE PATIENTS

- SAFETY  
 QUALITY  
 PATIENT EXPERIENCE
- PRODUCTIVITY  
 COST  
 TEAMWORK  
 COMMUNICATION

DR AMRITPAL SINGH (CLINICIAN LEAD), DR ASHISH R. SATAPATHY, DR SURINDER KAUR PADA, DR LYDIA AU, DR CHEN YONGSHENG, DR KAN YAAN MENG, WONG TZE CHIN, FIONE GUN, LEONG KIN SENG, ZARINA AHMAD, JOYCE ONG, ADJ A/PROF FAREED KAGDA (SPONSOR)

## Define Problem, Set Aim

### Problem/Opportunity for Improvement

COVID surveillance of patients is increasing due to the rising number of cases in the community. This would inadvertently create unintended delays in getting hip fracture patients to OT within 48 hours upon ED Admission order, potentially resulting in poorer outcomes.

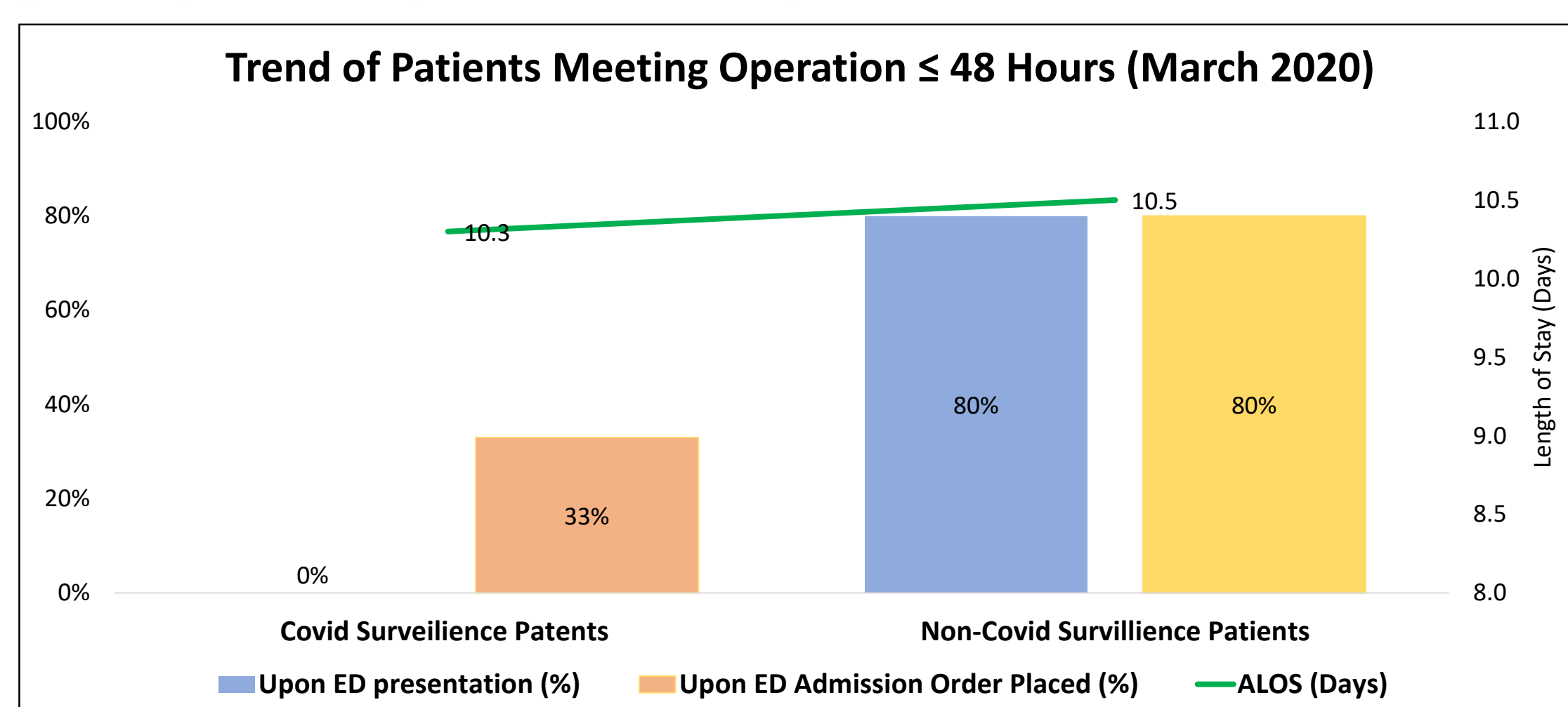
### Aim

We aim to increase the percentage of patients undergoing hip fracture surgery within 48 hours of Admission Order despite needing COVID surveillance.

## Establish Measures

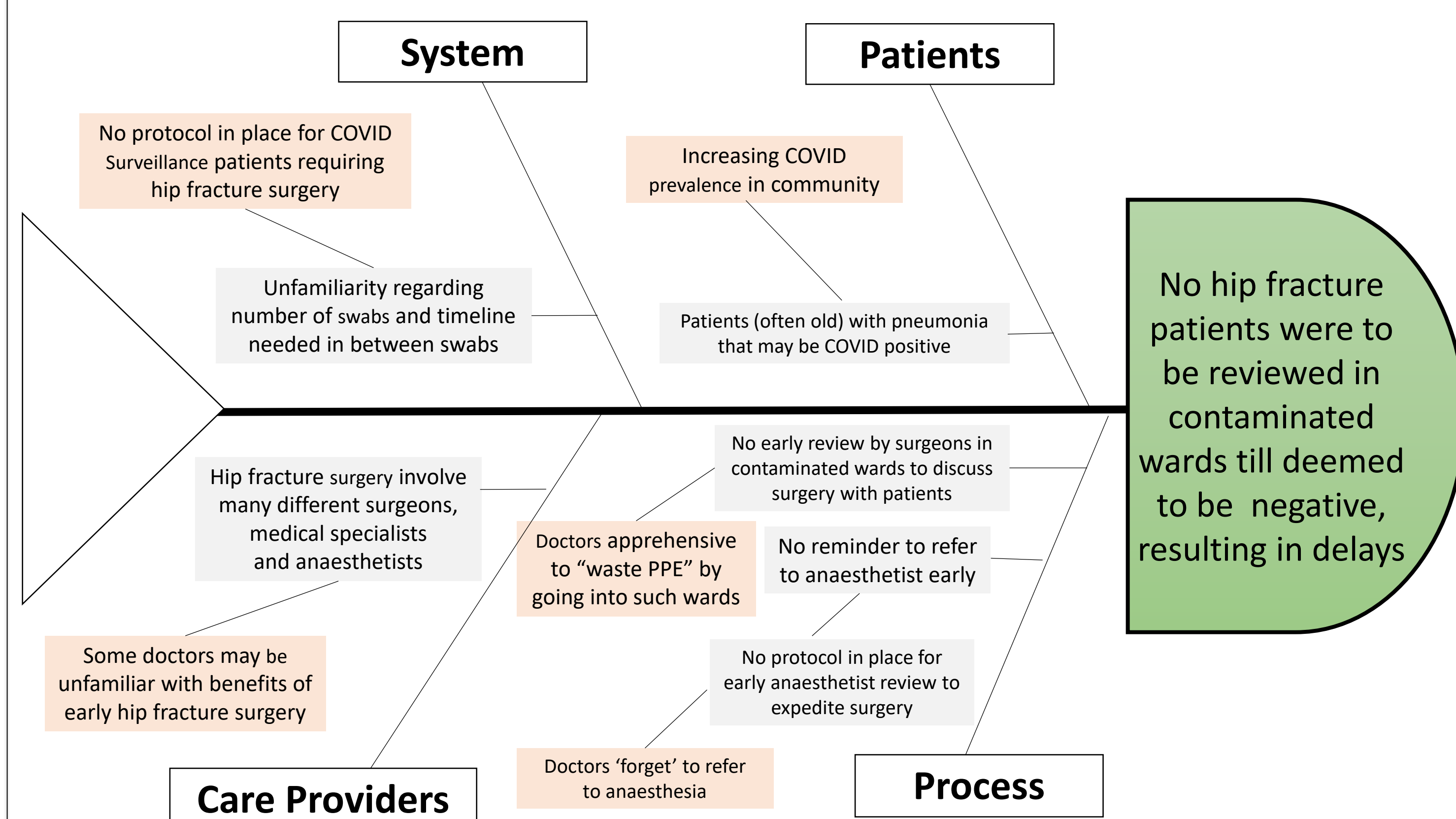
### Baseline Performance

- All operated hip fracture patients who underwent hip fracture clinical pathway were included.
- % of patients who were operated  $\leq 48$  hours upon ED presentation.
- Average Length of Stay, ALOS  $\leq 10$  days.



## Analyse Problem

### Root Cause Analysis



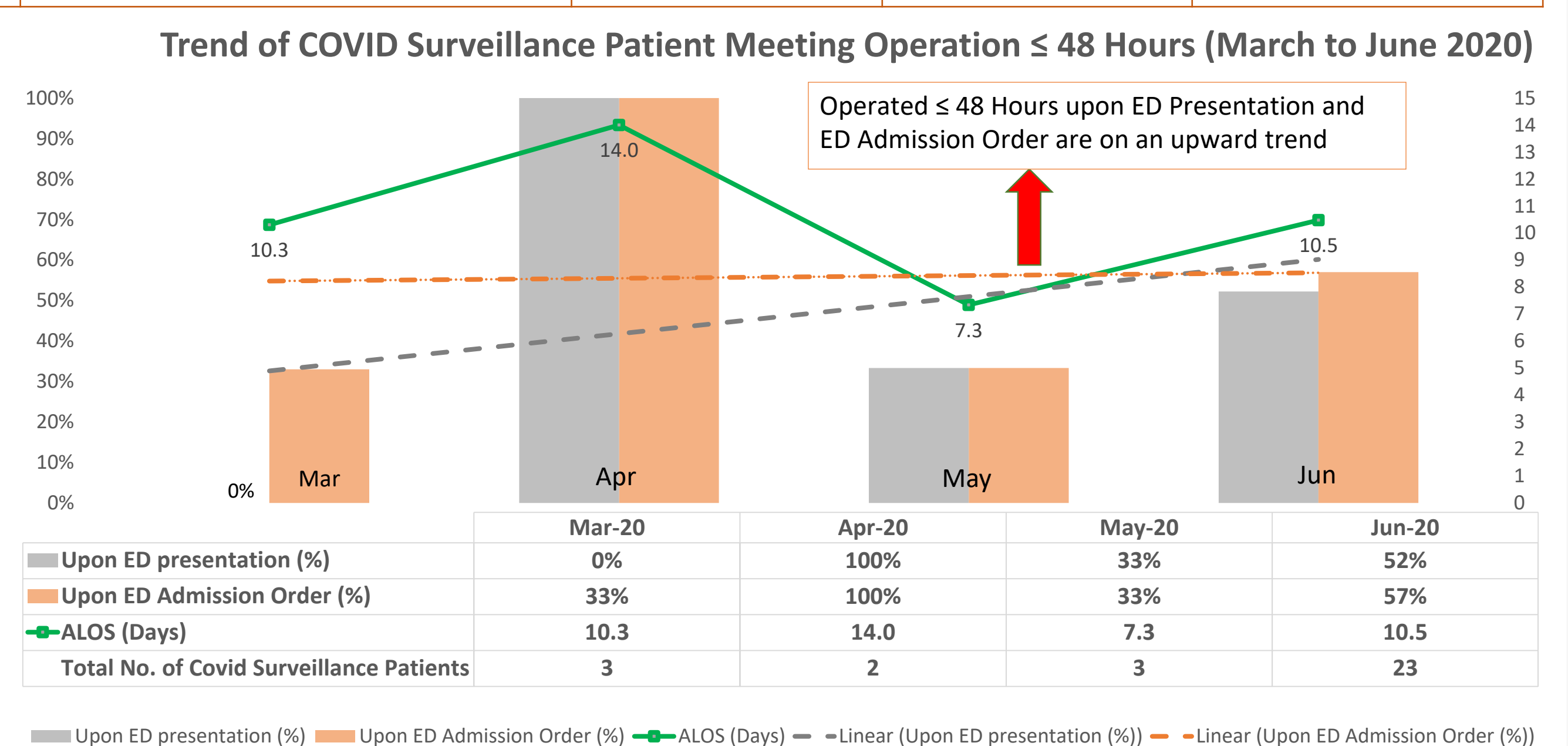
## Select Changes

### Probable Solution

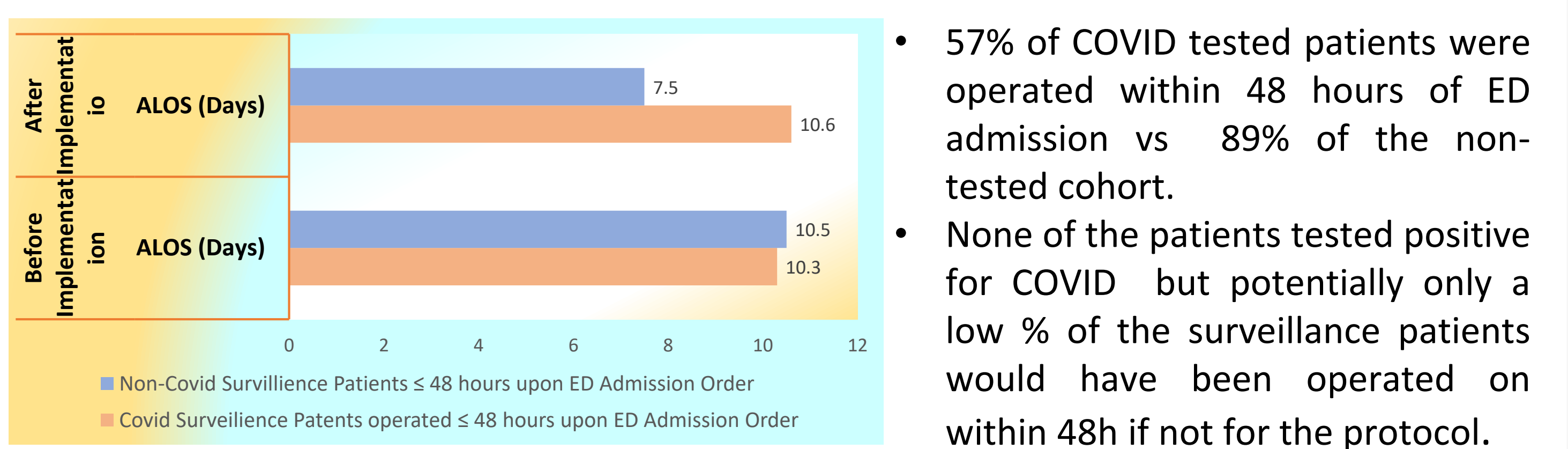
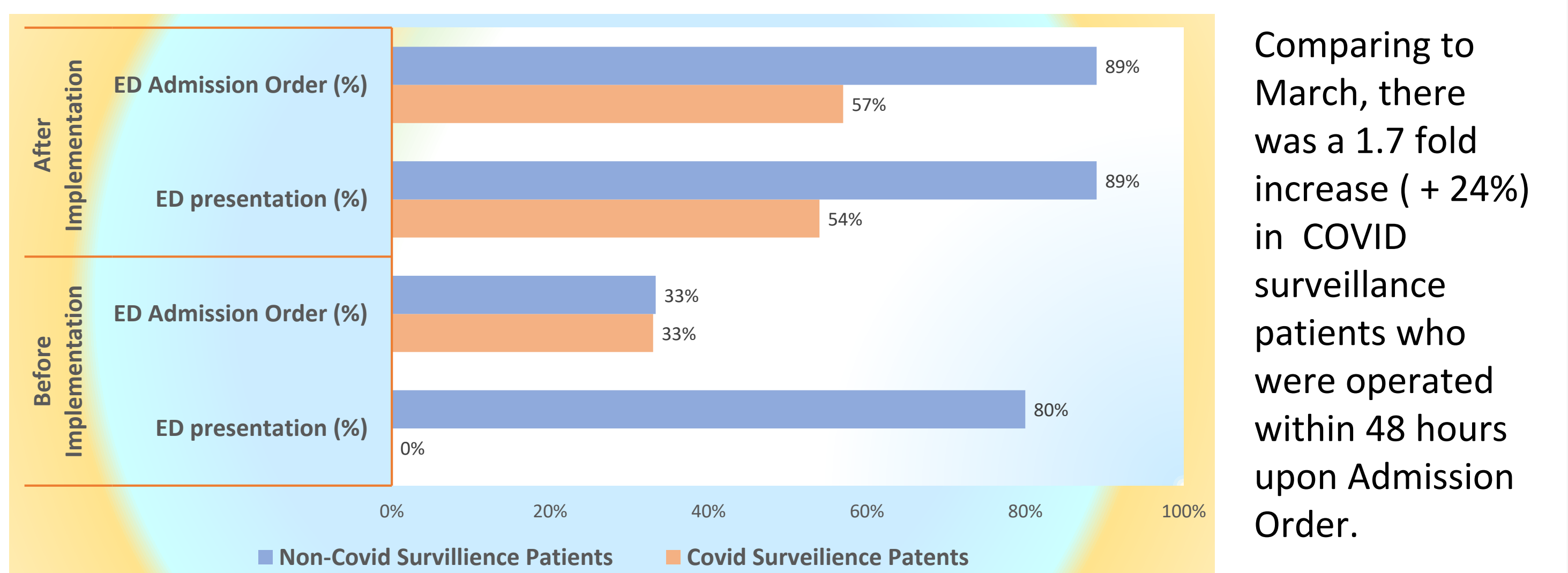
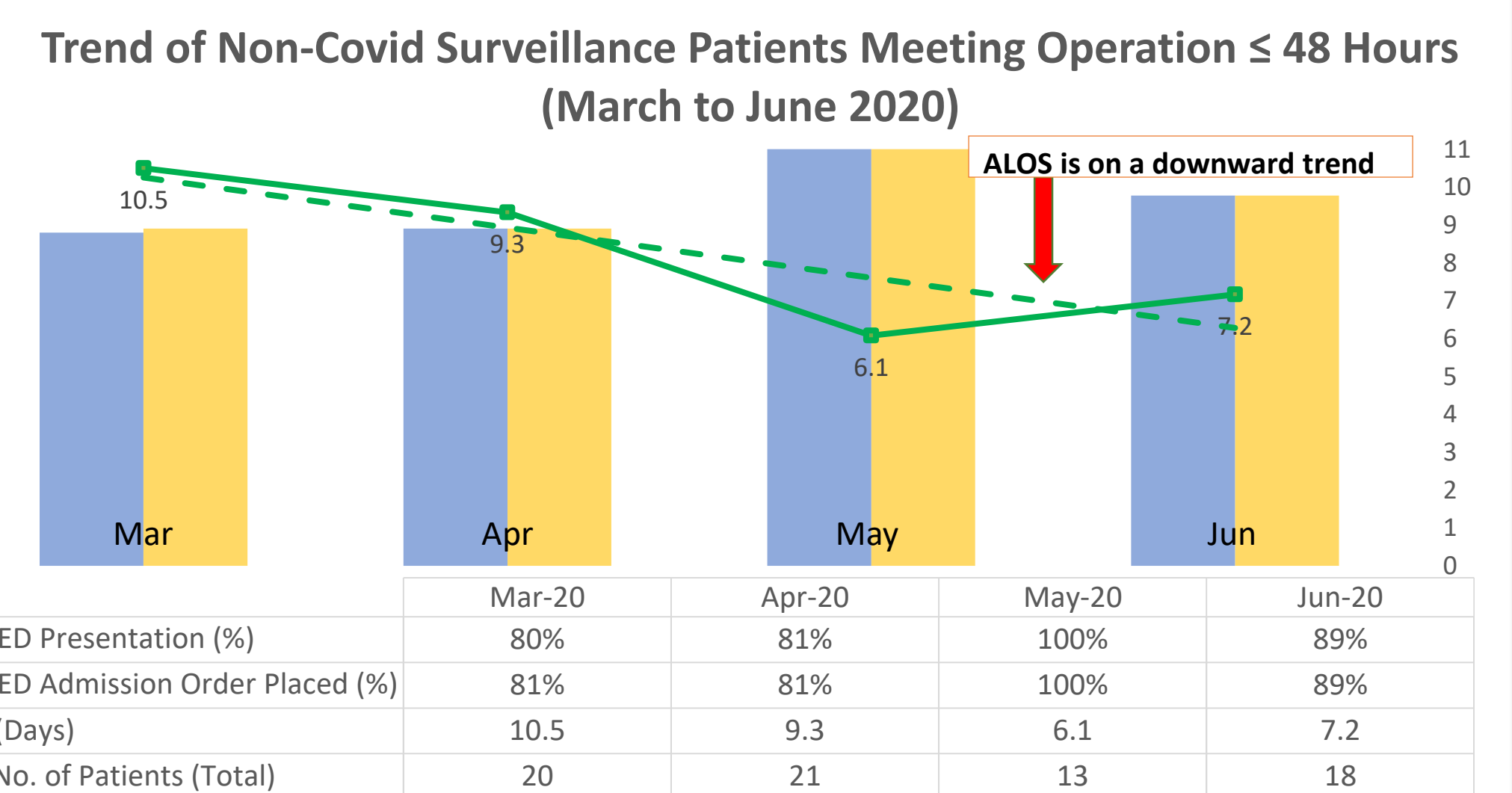
Root Cause	Potential Solutions
No early review by surgeons and anaesthetists in contaminated wards	<ol style="list-style-type: none"> <li>All hip fracture patients admitted to COVID Surveillance Wards were started on the hip fracture pathway and reviewed <math>\leq 24</math> hours by Orthopaedics team.</li> <li>Patients were reviewed by anaesthesia team early once decision for surgery was reached.</li> </ol>
No protocol in place for COVID Surveillance patients requiring hip fracture surgery	<ol style="list-style-type: none"> <li>All patients had COVID swabs done at 18 hours interval to meet 48 hours timeline.</li> <li>Patients were kept fasted pending results of 2<sup>nd</sup> swab and listed for operation as soon as swabs results were out.</li> <li>Patients were operated within the day of listing, keeping <math>\leq</math> the 48 hours window.</li> </ol>

## Test & Implement Changes

CYCLE	PLAN	DO	STUDY	ACT
1	Compare % of patients operated within 48 hours in COVID surveillance to non-COVID Surveillance group	Protocol implemented April 2020	Improvement in %	Continue protocol for COVID Surveillance Patients
2	Compare ALOS of COVID Surveillance hip fracture patients to non-COVID Surveillance group	Protocol implemented April 2020	ALOS Comparison between 2 groups	Continue protocol for COVID Surveillance Patients



Mean ALOS for the COVID tested cohort was 10.5 days vs 7.5 days for the non-tested cohort. Considering Covid surveillance patients had to stay 2 extra days, this difference was not significant.



## Spread Changes, Learning Points

### Spread Changes

- Expediting COVID Swabs can expedite surgery and improve hip fracture surgery outcomes.
- Delays can be reduced significantly by standardizing care protocols.
- Educating and familiarizing doctors with the benefits of early definitive hip fracture surgery within 48 hours of ED Admission Order.
- Despite a surge in patients requiring COVID Surveillance in June, improvements in ALOS and early operation rates were seen.

### Learning Points

- Further observation of more patients over longer periods is required to assess long-term outcomes of the protocol.
- Strong support from the multidisciplinary team is essential to the smooth and continued functioning of the hip fracture clinical pathway.