

Project Title

Implementing a Standardize Workflow on High Risk Specimen Collection in Isolation Ward

Project Lead and Members

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Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group(s) Involved in this Project

Nursing

Applicable Specialty or Discipline

Isolation Ward

Project Period

Start date: May 2020

Completed date: Dec 2020

Aims

The isolation ward intends to reduce the number of incident pertaining to high risk-specimen collection among HCWs by 80% from May 2020 to December 2020.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

A standardize workflow that is communicated to all HCWs can minimize the risk of infection control breaches as everyone is aligned to it.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign, Quality Improvement, Clinical Practice Improvement

Keywords

Standardize Workflow, High Risk Specimen Collection

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IMPLEMENTING A STANDARDIZE WORKFLOW ON HIGH RISK SPECIMEN COLLECTION IN ISOLATION WARD

MEMBERS: SSN CHEN SHEE HUI, SSN CHUA MINYI, SSN FAN JINGJING, SSN MALLU JANAKI, SSN SHARLEEN LAM HUI MIN
FACILITATOR: NC HEMA MALINI

Define Problem, Set Aim

Opportunity for Improvement

Isolation ward was converted into a full-fledged pandemic ward for COVID-19 since March 2020. Between March 2020 to May 2020, there were a total 6 cases of infection control breaches related to collection of high risk specimens amongst healthcare workers (HCWs - doctors and nurses) in isolation ward.

This can lead to the following:

1. Delayed in patient's diagnosis
2. Unnecessary discomfort to patient due to the need of specimen recollection
3. Increase risk of disease transmission due to improper handling of specimen

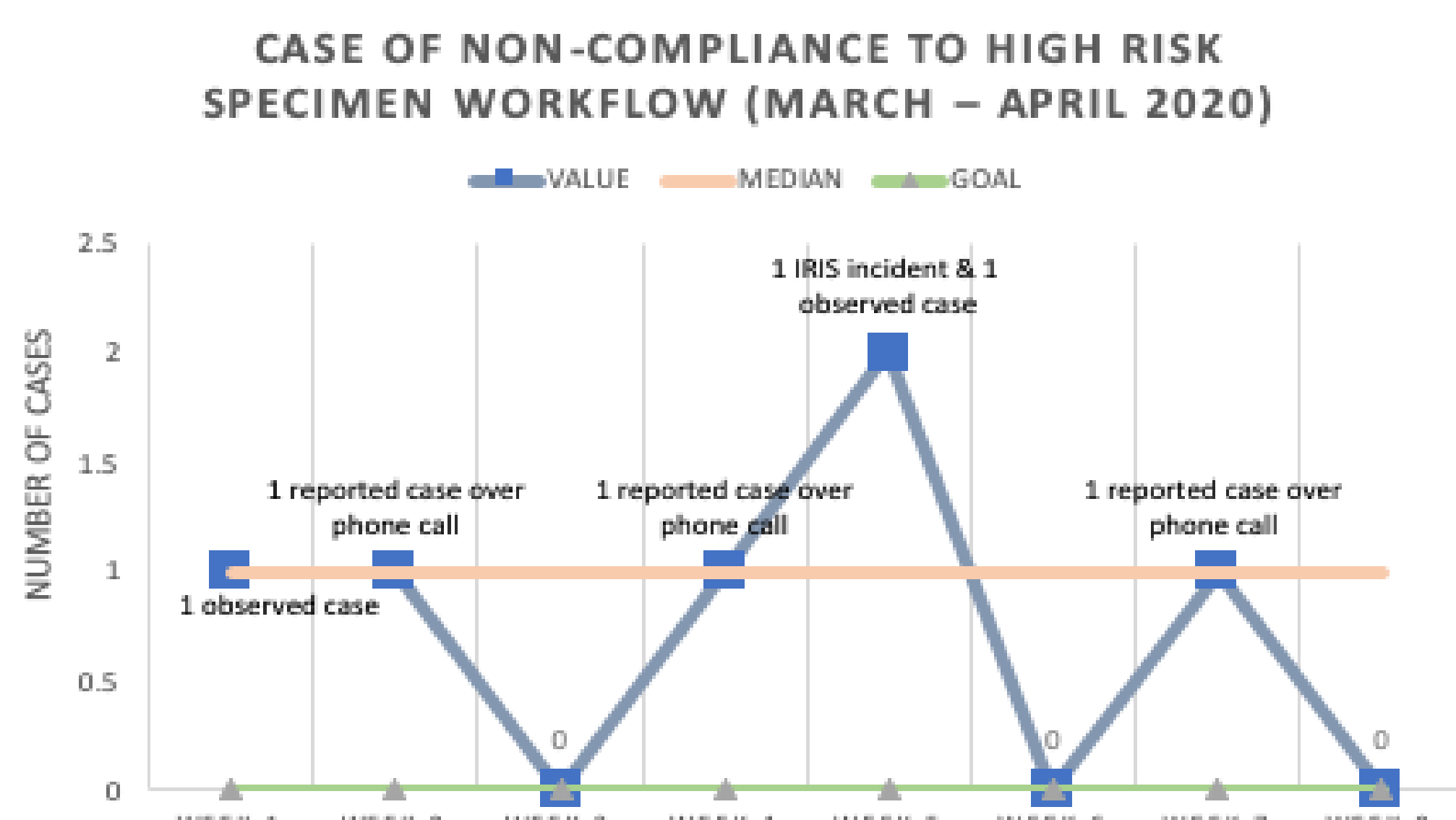
Aim

The isolation ward intends to reduce the number of incident pertaining to high risk-specimen collection among HCWs by 80% from May 2020 to December 2020.

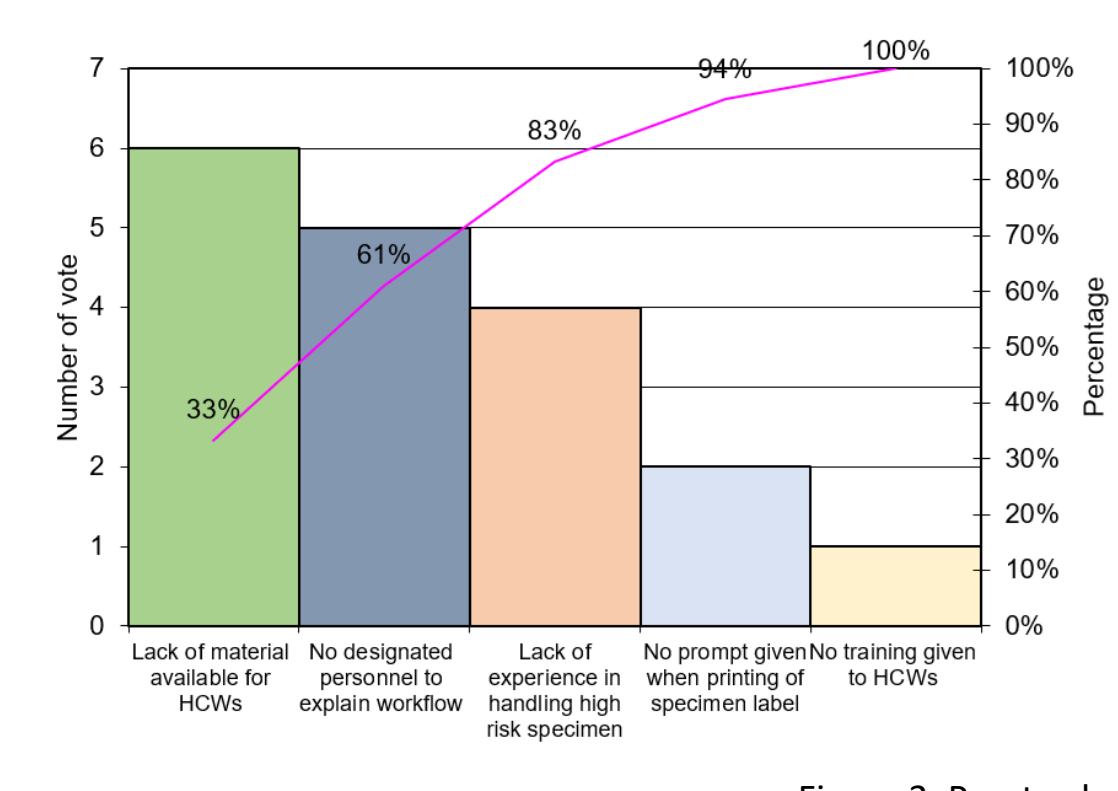
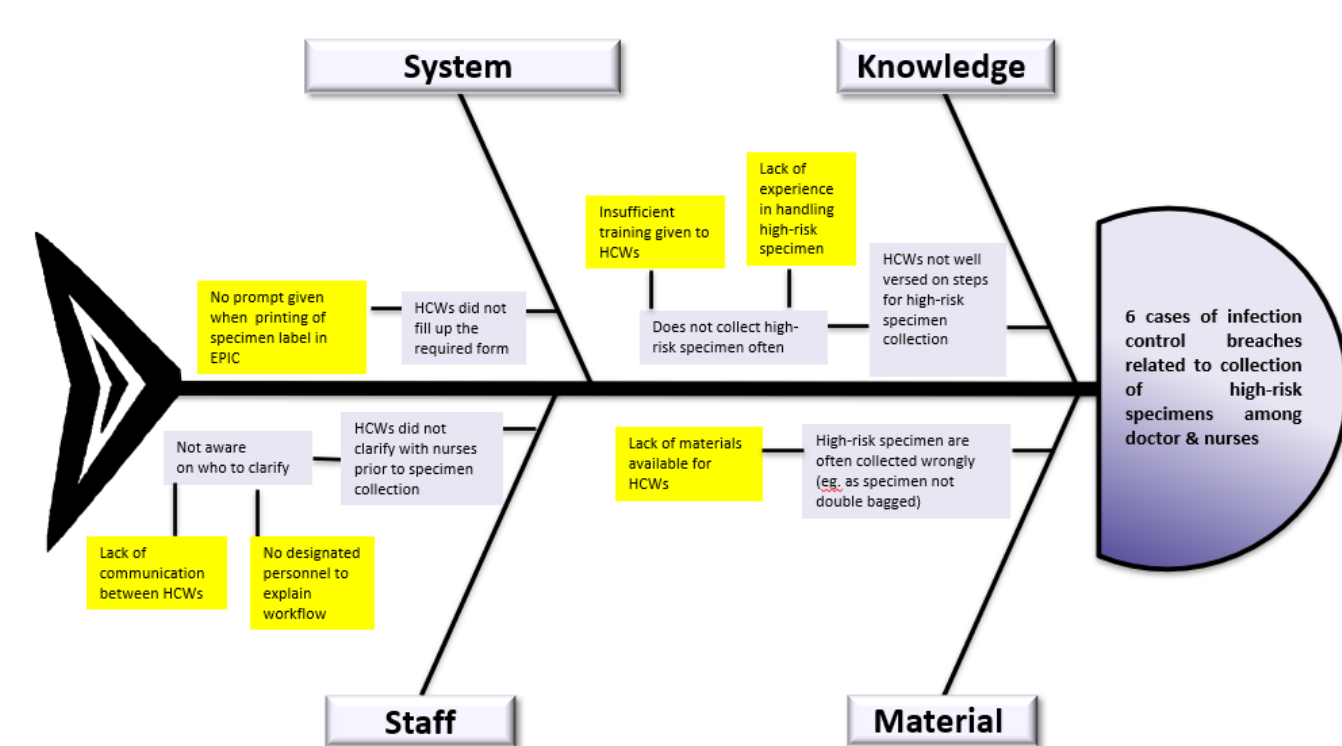
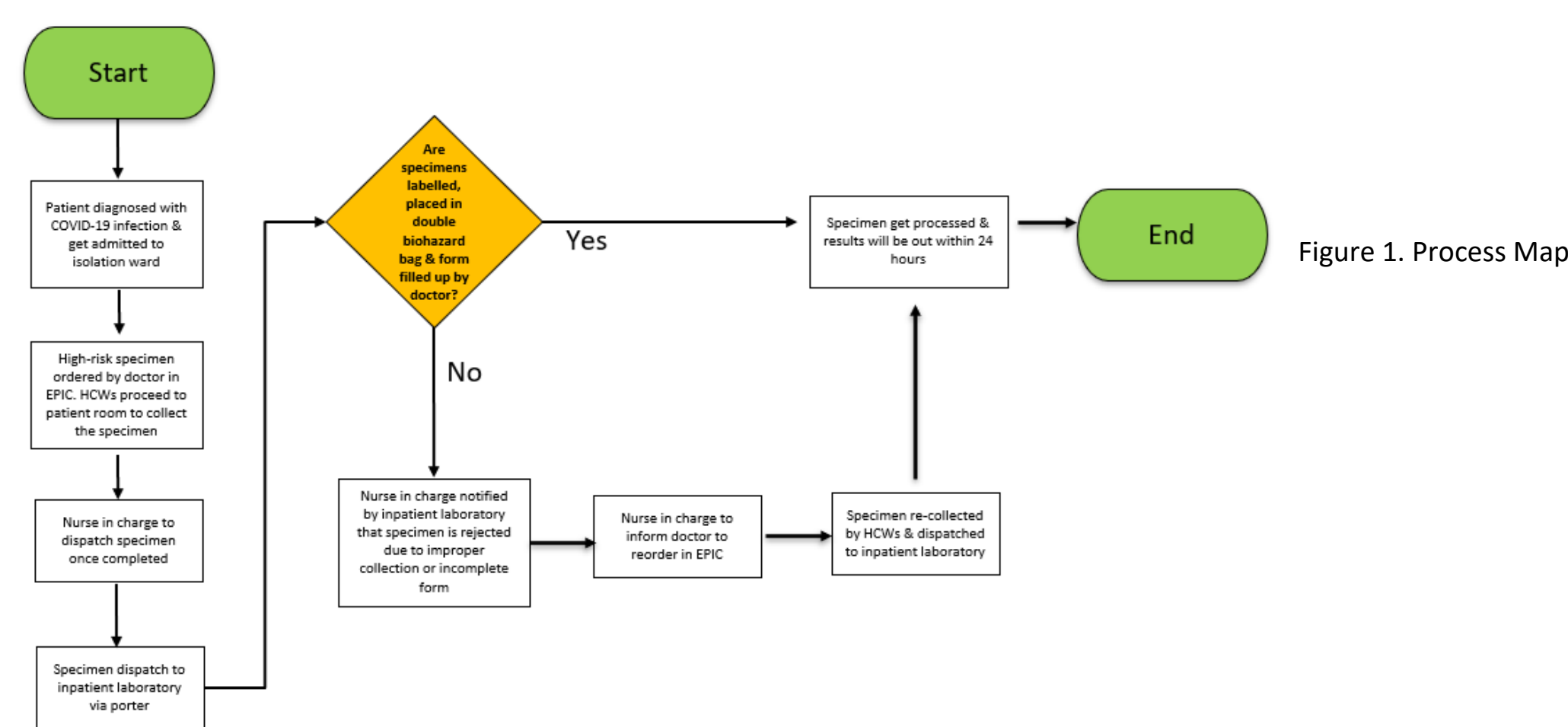
Establish Measures

Outcome Measure

Total of 6 incidents related to high risk specimen collection in isolation ward from March to April 2020.



Analyse Problem



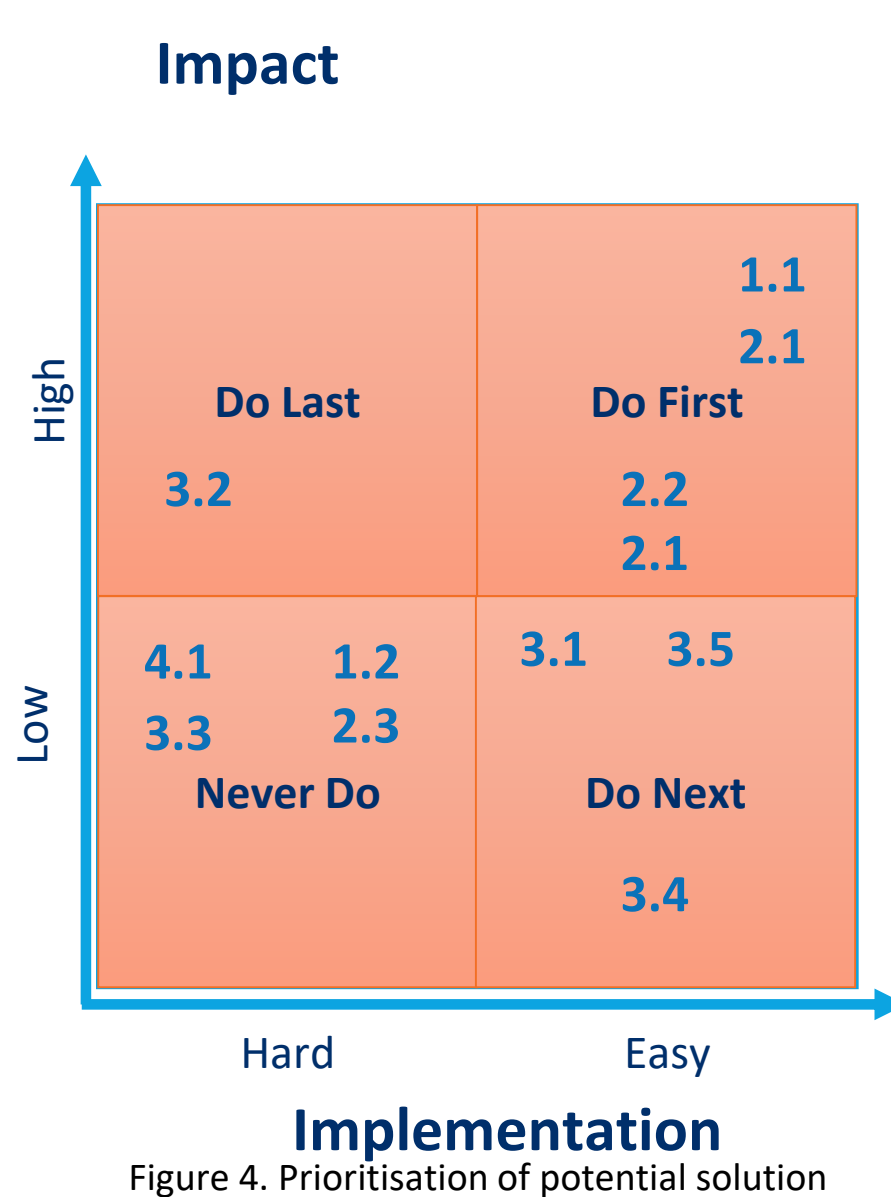
Out of the 6 root causes that were identified using the fishbone diagram, 5 were voted to create the Pareto chart. By implementing the 80/20 rule, 4 root causes were selected to be the project priority.

- SAFETY
- QUALITY
- PATIENT EXPERIENCE

- PRODUCTIVITY
- COST

Select Changes

Root Causes	Potential Solutions
Healthcare workers (HCWs) lack of experience in handling high risk specimen	1.1 Verbal reminder to nurses during daily roll call 1.2 Involve infection control department/Ops to provide education to new doctors
No designated personnel to explain the workflow	2.1 Delegate infection control liaison nurses (ICLOs) in the ward to provide explanation 2.2 Delegate the staff nurse in charge of patient to explain the workflow to doctors 2.3 Have a designated person to audit on the compliance rate
Lack of materials available for HCWs	3.1 Create poster for specimen collection and transportation 3.2 Create video in handling of high-risk specimen with visual cues, voice prompt and subtitles 3.3 Involve infection control department to create advertisement in hospital intranet 3.4 Place the poster in MO room for doctors 3.5 Place the poster at all phlebotomy trolleys for nurses and doctors
No prompt advice given while printing specimen label in EPIC	4.1 Liaise with EPIC team to implement automatic trigger while printing specimen label

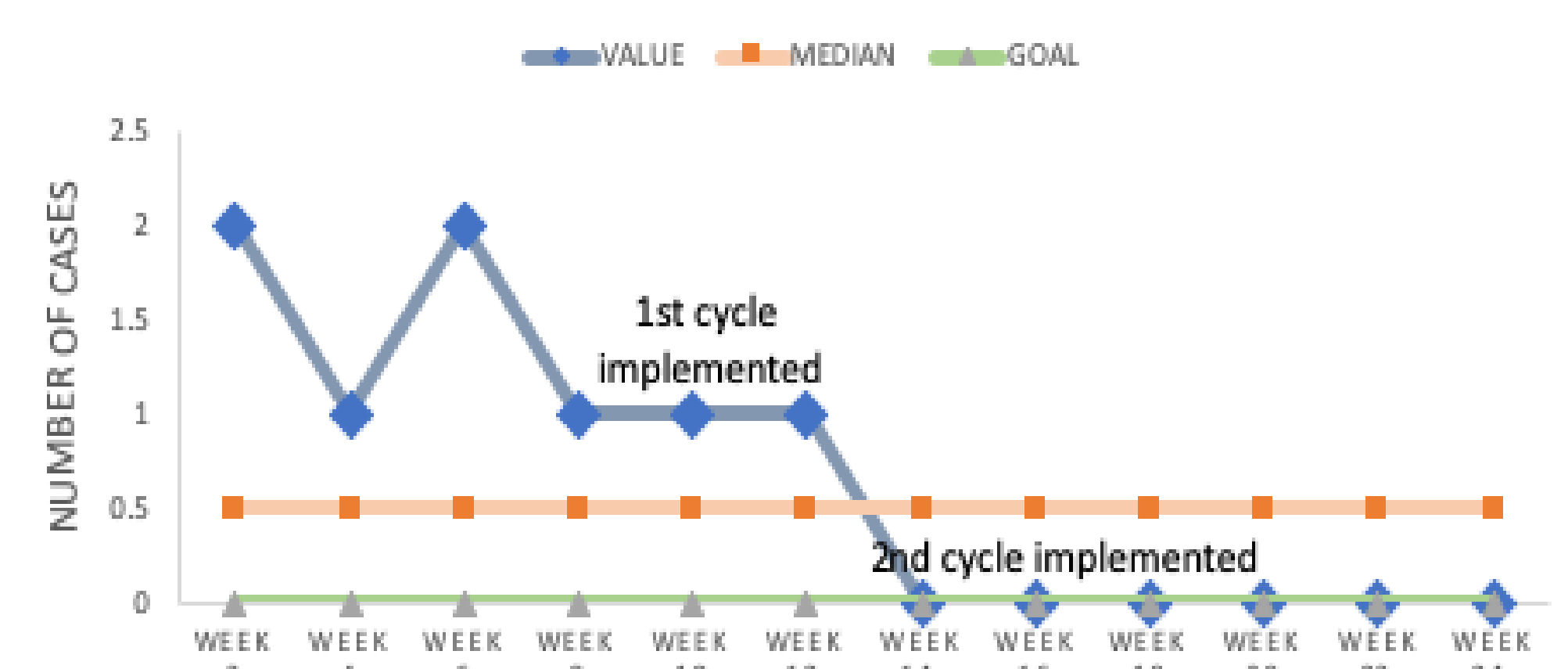


Test & Implement Changes

CYCLE	PLAN	DO	STUDY	ACT
1 Initiated on May 2020	• Assign designated staff to explain the workflow of high risk specimen collection	•Briefing on the workflow following this order, starting from 1.ICLO, then 2.Staff nurse in charge, then 3.Doctors • Remind staff on new workflow during roll call	•Nurses are able to adapt to the workflow •Infection control was breached in some cases as some of the staffs were not familiar with the new proposed workflow •Unable to delegate as nurse in charge are required to take case and attend to patients during specimen collection.	•To adopt the workflow, but add on more visual initiatives •ICLOs to train all nurses to explain the workflow to new doctors and nurses in the ward
2 Initiated on June 2020	•To increase the awareness on proper handling of high risk specimen •To remind HCWs to be compliant with the implemented workflow	•Create poster with pictorial cue •Print and place the posters at all phlebotomy trolleys and MO room •Create video in handling of high-risk specimen with visual cues, voice prompt and subtitles	•HCWs referred to the posters prior to specimen collection •Upon reminder from staff nurse in charge, HCWs were then compliant to the workflow handling process prior to specimen collection.	•No new reported incident related to high risk specimen collection •Will continue to adapt the use of poster and video •Regular audit and reminders are essential to monitor the compliance rate

Outcome Measure

CASE OF NON-COMPLIANCE TO HIGH RISK SPECIMEN WORKFLOW (MARCH – AUG 2020)



- Implementation of cycle 1 started on week 10. One case was observed within the week and the second case was observed on week 12.
- Implementation of cycle 2 started on week 14. No cases was observed.

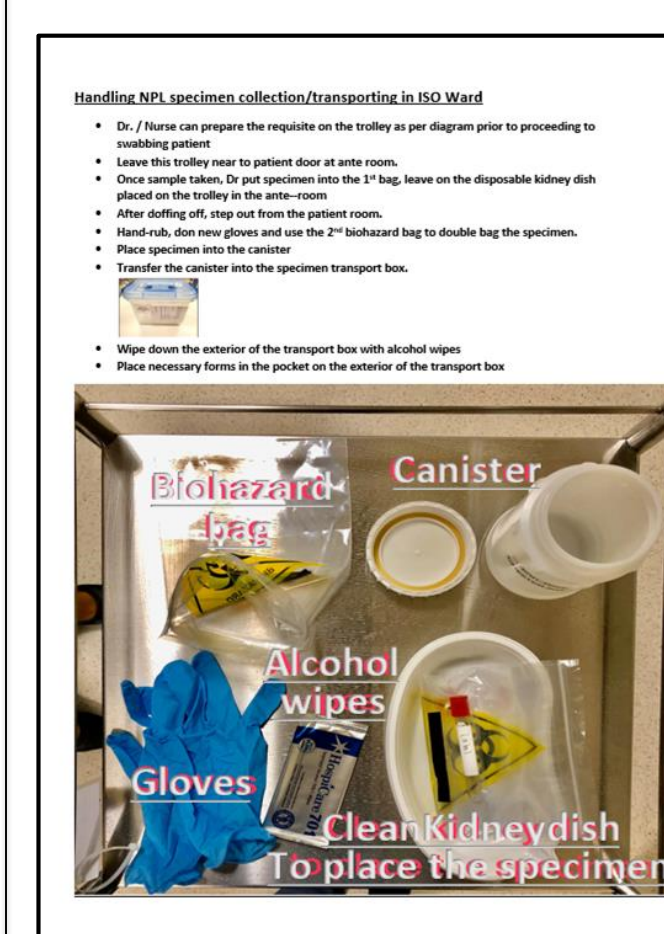


Figure 5. Poster



Figure 6. Video on collection of high-risk specimen

Spread Changes, Learning Points

Spread changes:

1. Engage infection control team to standardize, execute and educate proposed workflow in COVID ward settings. This ensures that all HCWs in the hospital are aligned on the proposed workflow to prevent future lapses.
2. To reinforce this workflow to all HCWs, communication department to be involved in uploading workflow materials on intranet permanently and develop official posters to be placed in the wards, serving as visual reminders.
3. Audits can be carried out monthly by trained staff to monitor the compliance rates in ward setting.

Learning points:

1. For effective changes to be seen, multiple stakeholders has to be involved to exchange perspectives in producing a rounded solution. These stakeholders include doctors, nurses, infection control team and communication team.
2. A standardize workflow that is communicated to all HCWs can minimize the risk of infection control breaches as everyone is aligned to it.