Achieving Zero Specimen Error in Operating Theatre Setting

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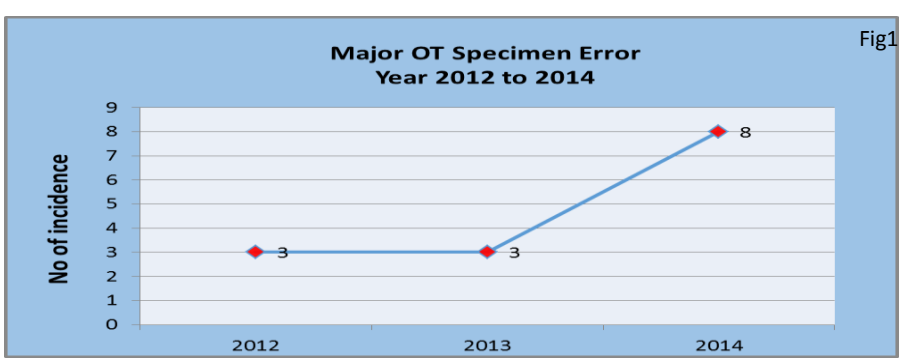
Introduction

A specimen is a sample of a tissue, blood or body fluid taken for analysis and diagnosis. In Major Operating Theatre (OT), specimens are obtained during surgery to confirm patient's diagnosis so that patient can receive prompt medical treatment.

Background

There was a significant increase in specimen related errors from 3 in 2012 and 2013 to 8 in 2014 which was alarming (Fig 1).

Fig1

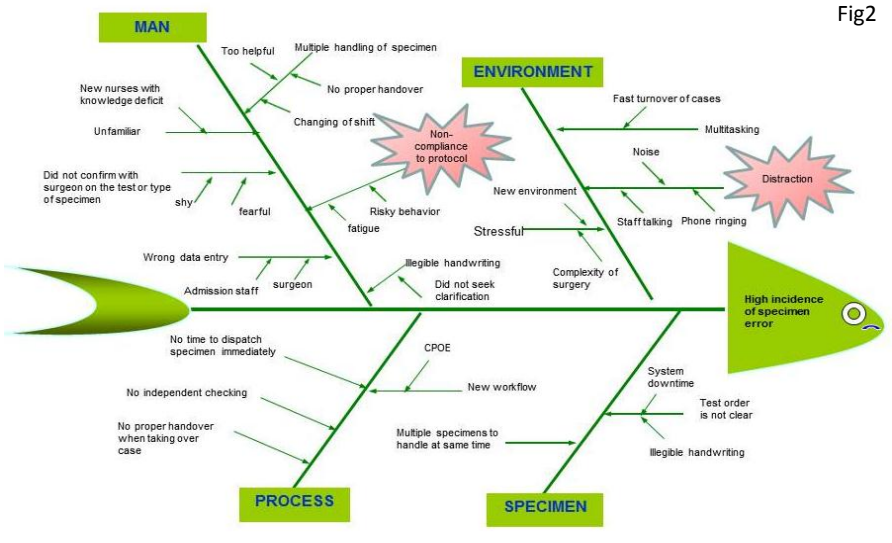


Objective

The objective of this project is to identify the root cause of specimen errors and subsequently develop intervention to achieve zero specimen error within 6 months.

Root Cause Analysis

Fig2



A root cause analysis was conducted to identify the possible factors contributing to specimen errors and develop actions to prevent specimen error. The two main contributing factors are distraction and non-compliance to protocol.

Intervention

Using the Plan, Do, Study, Action (PDSA), the team looked into the problem. Humans are prone to lapses and errors especially when they are experiencing fatigue, stress and surgical environment pressure. Therefore, introduction of independent checks and positive outcome reinforcement to mitigate errors were implemented.

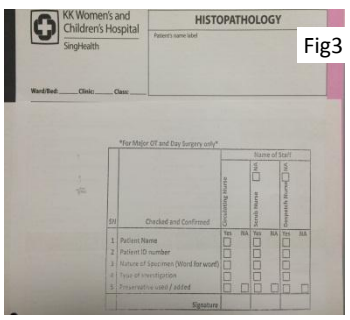


Fig3

- Pre-printed checklist (Fig3) was incorporated at the back of histology form to facilitate the ease of checking by nurses
- 3 mandatory independent checks by scrub, circulating and dispatch nurse were performed to ensure correct patient, correct specimen, correct test and correct preservative before dispatch to laboratory.

Fig4

- A Calendar Chart (Fig4) was put up in staff lounge to keep track on zero specimen error days.
- The aim is to focus staff attention on positive outcome instead of reporting number of errors.
- Nurses are further encouraged and reinforced the correct practices during roll call when we passed 30 days, 60 days, 100 days with zero specimen error.
- With this display, nursing and medical personnel are made aware of this initiative.

Fig5

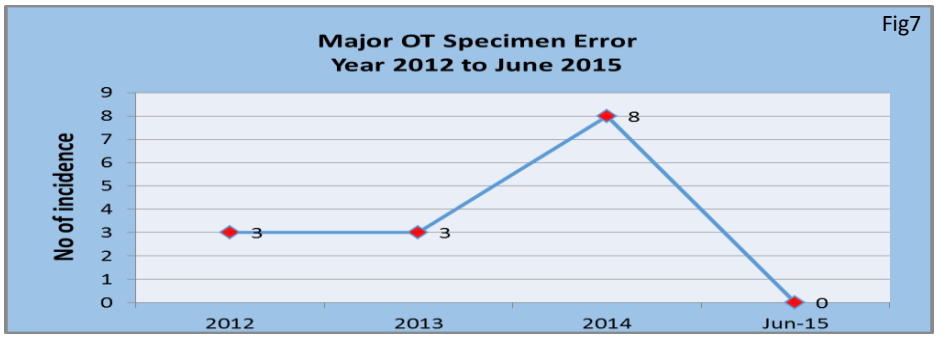
Fig6

We celebrated our achievement of 100 days of zero specimen error and this positive outcome reinforcement further encourages staff to continue with correct practices when handling specimens (Fig 5 & 6).

Results

The implementation of 3 mandatory independent checks and positive outcome reinforcement were effective as it creates awareness among the team. Till to date, there is no specimen error incident reported (Fig 7).

Fig7



Conclusion

Specimen error is undesirable yet preventable. With checklist for independent checking, calendar chart display and positive outcome reinforcement, we managed to achieve zero specimen error which indirectly improved patient outcome through accurate diagnosis and prompt medical treatment.