Using Simulation As A Tool To Evaluate The Existing OT "Code Blue" Workflow In The Newly Opened IVF Operating Theatre (OT) in KK Hospital

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Introduction

The newly opened IVF OT consists of one operating theatre with 11-bedded recovery room. IVF OT is in a remote location on the third floor and is away from Major OT complex which is on the

This simulation exercise highlighted many gaps in the suitability of existing OT workflow for this environment which would impact patient safety in the IVF OT recovery room.

Result

second floor.

It was anticipated that the only available medical response team may be engaged with procedure in OT, and consequently there may be a delay in the arrival of responders to IVF OT recovery area. This is different from Major OT where usually have someone available to assist in an emergency.

Objective

We aimed to use simulation as an evaluation tool to test the adequacy of existing KKH OT Code blue workflow in the newly opened satellite IVF OT recovery room.

Methodology

Plan-Do-Study-Act (PDSA)

PDPA was used to evaluate the efficiency of existing "Code Blue' workflow in IVF OT. A Fish Bone chart was used during study phase to identify the factors related to assumed inefficiency in responding to the Code blue activation in IVF OT recovery room. We recognised that the internal Code activation would be inadequate for effective management of an emergency in IVF OT recovery room due to lack of suitable personnel, therefore, hospital Code team would need to be activated for any effective response in IVF OT.

It was also identified that the hospital Code team and anaesthetist were unable to access to IVF OT recovery area due to existing security restrictions, this delayed the responding time to the site.





Additional processes were added into existing Code blue workflow for IVF OT after the first simulation exercise.

- Hospital Code team to respond during emergency in IVF OT
- Grant access rights to all Anesthetists and hospital Code team staff

The findings of the first simulation exercise led to second simulated exercise being conducted, this time hospital wide Code team was the primary responders and the responding was more effective and coordinated.

- The first simulation was planed and conducted with surgeons, Anaesthetists and IVF OT nursing team, based on existing OT Code Blue workflow. This requires the activation of an 'Internal' OT Code blue within the OT complex during office hours, and the initial responders are from IVF OT complex.
- Our observations included
- Quality of responders arriving at the simulated emergency
- Their response time to the site
- The effectiveness of the response team in dealing with the emergency in the recovery area.

Conclusion

Using simulation to evaluate the efficiency of an existing "Code Blue" workflow for a new environment was an effective tool, as it allowed us to identify many gaps in mounting an effective and timely response to "Code Blue" activation in IVF OT recovery room, with its impact on patient safety.

Simulation also allows us to give an opportunity to Code responders to become familiar with the workflows, environment and the physical layout of newly opened clinical areas in the hospital, leading to greater efficiency in managing emergencies.