

Does Immersive Medical Emergency Team Response Simulation Improve Self Efficacy?

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Introduction

A medical emergency team (MET) response requires an integrated and coordinated approach if optimal patient outcomes are to be achieved. Enhanced learning through simulation training has been used successfully to improve both technical and non-technical skills of clinical staff responding to medical emergency response scenarios.

Aim

The aim of this project was to evaluate the self-efficacy of inter-professional clinical staff who participated in a high fidelity simulation based MET response session.

Methods

A posttest only design was used to evaluate the impact of high fidelity MET response simulations on confidence levels. In 2018, clinical staff from three hospitals participated in MET crisis resource management (CRM) training using immersive simulation. Data analysis consisted of descriptive statistics and ordinal logistic regression modelling.

Results

There were 326 participants, 58% (n=189) were medical officers and 42% (n=137) nurses. Self efficacy was rated using a five point Likert scale with regard to:

- Managing a clinically deteriorating patient
- Participants' role in a MET response
- Participants' CRM knowledge
- Participants' technical skills
- Applying non-technical skills such as leadership, communication etc in an emergency.

The MET CRM simulation outcomes showed significant associations with improvements observed in all five confidence measures. Findings showed that confidence levels for MET role response and CRM knowledge significantly improved amongst staff who reported lower levels of confidence prior to undertaking the MET CRM simulation (p-value < 0.001).

For staff who had previous MET CRM simulation training and after adjusting for the simulation training effect, results showed that involvement in a real MET response was associated with higher confidence levels in undertaking their role in a MET response (p-value =0.04) and when applying clinical-technical skills (p-value=0.015).

Conclusion

The findings from this study provide evidence that MET CRM simulation training greatly enhanced the self efficacy of clinical staff who participated in simulation training. In particular, strong positive effects were observed for participants' self efficacy with regard to their MET role responsibilities and knowledge of crisis resource management principles.

Submitted for the Leadership- staff oral presentation section