



Simulation Based Education. Is it all that?

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Simulation based education (SBE)

- Technique for practice and learning that can be applied to all disciplines in healthcare
- SBE enables professional collaboration, practice of crisis resource management (CRM) principles and ultimately improve patient health outcomes
- 'to err is human' this report recommended that health care needed to provide team training in critical care areas.
- Rural Urban disparities – 'the Matthew effect'
- International mortality penalty
- Access to SBE difficult for rural hospital teams

Background

- Rural hospital teams are exposed to high risk situations less frequently than urban counterparts
- Rural hospital teams must provide competent safe care to its community yet its exposure to emergencies is limited
- The aim of the literature review was to consolidate extant research on simulation-based education and to see if it maintains or develops the clinical skill set including technical, non-technical skills and clinical knowledge of rural hospital teams

Technical skills

- Improvement in technical skills (10 Of 16 studies)
- Technical skills Increased with exposure to SBE
- As technical skills increased so did clinical knowledge, competence and patient care outcomes
- Clinical knowledge does not translate to clinical skills hence the strong argument to practice technical skills with SBE



CRM

- Value of practicing the non-technical skills
- Experiential learning provided through simulations proved to be effective method for the healthcare professional (HCP) to learn concepts not traditionally included in clinical training.
- Riley et al. (2011) prospective study reviewing perinatal morbidity and mortality data by comparing no training (control), didactic vs didactic and in situ simulations to rural hospital teams over 3 hospitals. The group that received the simulation training had a 37% reduction in perinatal harm.
- Cooper et al. (2011) demonstrated that situational awareness of the HCP is vital for improved patient outcomes

Health care practitioner satisfaction

- 6 studies reported positive HCP satisfaction after attending simulations
- Participants from willet et al. (2011) study indicated that SBE increased their confidence to work in a rural area.
- 98% of participants found the course a valuable learning experience (Gutenstein et al., 2019)
- Copper et al (2013) study had significant self rated improvements in knowledge, confidence and competency after the simulation study.
- HCP satisfaction increased with the use of high fidelity simulators compared with low fidelity simulators (Stellflug & Lowe, 2018; Masters et al., 2017).

Safety

- Studies that delivered an in situ simulation programme, identified local issues and staff gained comfort levels using their native environment and equipment (Guise et al., 2010; Katznelson et al., 2014; Wodrich et al., 2013).
- Eight studies provided an in situ program. (Bayouth et al., 2018; Guise et al., 2010; Katznelson et al., 2014; Katznelson et al., 2018; Marshall et al., 2015; Masters et al., 2017; Riley et al., 2011; Wodrich et al., 2013).
- Medication safety (Bayouth et al., 2018; Guise et al., 2010; Marshall et al., 2015).
- Improved patient care outcomes with simulation was reported in eight studies (Bayouth et al., 2018; Katznelson et al., 2014; Katznelson et al., 2018; Kinsman et al., 2012; Marshall et al., 2015; Riley et al., 2011; Stellflug & Lowe, 2018; Wodrich et al., 2013)

Interprofessional teams



- Ten studies involved interprofessional teams in the simulations (Bayouth et al., 2018; Guise et al., 2010; Gutenstein et al., 2019; Katznelson et al., 2014; Katznelson et al., 2018; Marshall et al., 2015; Martin et al., 2017; Masters et al., 2017; Riley et al., 2011; Stellflug & Lowe, 2018)
- Three studies reported behavioral change at some workplaces with three local hospital teams initiated SBE to continue after the study ended (Gutenstein et al., 2019; Katznelson et al., 2014; Katznelson et al., 2018)

Access to SBE

- Eight studies delivered in situ simulation
- Five studies cited access to SBE an obstacle to attend
- Large costs associated with sending staff to SBE at simulation centres this cost reduced when SBE delivered in situ

Principal findings

Access to rural simulation-based education



Interprofessional teams



Practice broad clinical skill set



Quality rural health care & improved patient safety

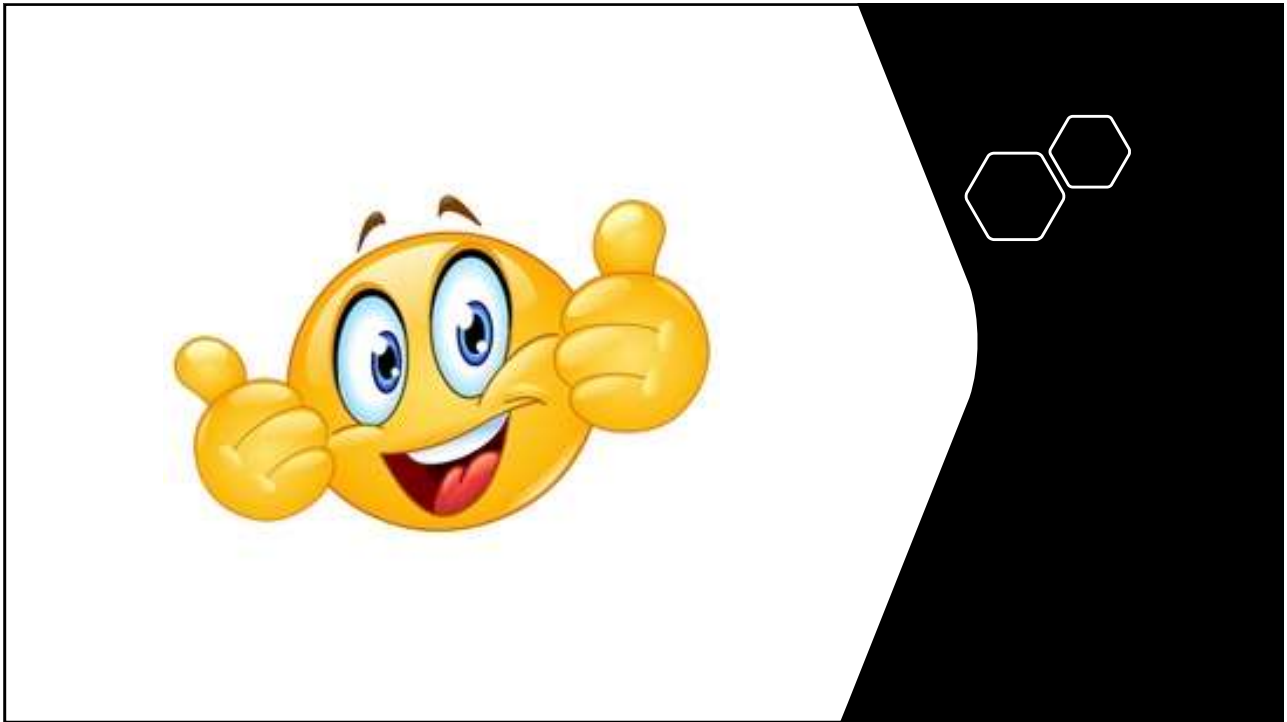


Implications & recommendations for Practice

- Local hospital level – management teams have to prioritise professional development opportunities
- Postgraduate course curricula's need to be developed with key stakeholders including the rural hospital workforce.
- Government need to invest in the training of the rural HCP workforce. National simulation strategies need to be developed to address the needs of the healthcare workforce.
- A recommendation for NZL is to implement a mobile simulation unit similar to those that have been developed in other countries

RiSC- Trauma and Medical

- Rural, Interprofessional focused
- Delivered by Rural health care professionals



Any
Questions?

DOCTOR FUN

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What's new in medical school simulation?

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