INTERPROFESSIONAL EDUCATION:

Nurses' experiences in a rural interprofessional simulation course

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Abstract

Introduction: The Rural Inter-Professional Simulation Course (RiSC) in New Zealand is a 3-day immersive course that brings rural doctors and nurses together to practise emergency and trauma skills using workshops and a simulation-enhanced interprofessional experience (SEIPE). The course aims to increase practitioners' psychomotor skills, communication, teamwork and leadership skills through simulation-based learning and translate this into the management of trauma in rural settings.

Methods: This study employed an exploratory, descriptive design to explore transfer of learning from RiSC into clinical practice 8 months post course participation. Six registered nurses who participated in RiSC took part in semi-structured interviews. The transcribed interviews were analysed using a general inductive approach.

Results: The nurses valued the learning experience in RiSC and used the skills they learnt in clinical practice, however factors such as their perception of the authenticity of the scenario and performance anxiety impacted the SEIPE. The nurses also observed interprofessional dynamics playing out during the SEIPE.

Conclusions: RiSC is effective for rural trauma team training, however some aspects of the use of simulation in interprofessional education could be further enhanced.

Keywords: registered nurse; rural healthcare; interprofessional education; simulation

Introduction

In rural New Zealand, a relative lack of exposure, training opportunities, collegial support and team cohesion may create a gap in performance in trauma and emergency medicine between rural and urban hospitals (Gutenstein & Kiuru, 2018). Skill degradation may occur in rural healthcare teams, as they may not manage critically ill patients on a regular basis (Brown & MacKinnon, 2016). One suggestion to upskill rural healthcare practitioners in acute trauma is to use simulation-enhanced interprofessional experiences (SEIPE) (Oseni et al., 2017). The purpose of SEIPE is to provide healthcare

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teams with an opportunity to work together in a simulated clinical situation to improve interactions and collaboration between health professionals, ultimately benefiting patient outcomes (Sittner et al., 2016).

This paper reports the findings from a qualitative study that explored the experiences of registered nurses (RNs) from rural areas of New Zealand who participated in The Rural Inter-Professional Simulation Course (RiSC). The research question was "How do nurses experience SEIPE as a learning experience and what is the impact on their future management of rural trauma patients?"

Background

Interprofessional education (IPE) is a popular educational strategy to help foster effective healthcare teams (Dunnack, 2020). IPE aims to bring healthcare professionals together to learn interactively and, in consequence, improve interactions and collaboration of the health disciplines (Gergerich et al., 2019; Reed et al., 2021). A range of positive outcomes from IPE have been reported, such as the optimal use of each healthcare team member's skills, improvements in patient safety and better provision of health services (Martin et al., 2021; Reeves et al., 2015).

While findings such as these are encouraging, research has also identified several challenges associated with interprofessional education (Gergerich et al., 2019; Martin et al., 2021; Sunguya et al., 2014). These include preparing the participant to engage with IPE, identifying appropriate learning activities and gaining funding for the programs (Martin et al., 2021; Perron et al., 2022). Different approaches to patient care, diverse knowledge levels and a range of learning needs may also hinder IPE (Martin et al., 2021; Perron et al., 2022). A tendency towards stereotyping the other professions, favouring their own philosophies and a perception of the medical profession being dominant may challenge collaboration and create an expectation that the medical participants will take the lead (Perron et al., 2022; Sunguya et al., 2014). Team dynamics and a reinforcement of traditional power relationships in IPE have also been identified as barriers to a collaborative approach to care (Baker et al., 2011; Gergerich et al., 2019; Perron et al., 2022).

The use of simulation in IPE is increasing (Dunnack, 2020). In healthcare, a simulation seeks to replicate a clinical situation (Sittner et al., 2015) so participants can practise and master clinical skills and scenarios in a safe and controlled environment (Reed et al., 2021). Including simulations as part of IPE offers healthcare professionals the opportunity to practise teamwork, learn about each other's roles, evaluate behaviour and attitudes, and analyse and develop their performance together (Gum et al., 2010; Reed et al., 2021). Simulation has also been promoted as the gold standard for communication training (Foronda et al., 2016). This paper uses the term simulation enhanced interprofessional experiences (SEIPE) to describe this learning opportunity.

Studies have shown that participants rate SEIPE highly as a learning experience (Prentice et al., 2011; Tilley et al., 2021). Research also suggests that SEIPE are an effective education strategy to teach communication and teamwork and to increase participants' capacity to manage clinical situations (Dunnack, 2020). Gum et al. (2010) found that after SEIPE, participants were more aware of other health professionals' roles and more at ease when interacting with the other professions. These researchers also noted that SEIPE provide participants with important opportunities to review and appraise their leadership skills. Participants' confidence and self-efficacy to manage clinical events has also been shown to increase following SEIPE (Egenberg et al., 2017; Watters et al., 2015). Wehbe-Janek et al. (2012) found that using SEIPE to train practitioners in rapid response and resuscitation improved their confidence in managing these situations. Wong et al. (2016) reported that after participating in SEIPE, there were sustained improvements in participants' attitudes about teamwork and communication to promote patient safety.

However, anxiety associated with SEIPE is mentioned frequently in the literature (Madsgaard et al., 2022). Van Schaik et al. (2015) found that junior doctors may feel anxious when undertaking simulations with experienced nurses. These researchers also reported that in the debriefing, doctors were reluctant to give critical feedback as they feared it would affect existing interprofessional relationships. Van Schaik et al. concluded that it might be overly optimistic to believe that these interprofessional dynamics could be mitigated through team training and suggested that hierarchical barriers must first be overcome before this training is attempted. Similarly, Eddy et al. (2016) found that in teamwork training, miscommunication or teamwork failure could occur due to professional hierarchies in the current healthcare system. These researchers reported that, compared to physicians, nurses might find it difficult to speak up if they thought their input might not be well received. Nonetheless, the authors concluded that adding simulation and specific communication strategies to teamwork training could provide a powerful learning opportunity for health professionals to practise teamwork.

Very little research has been completed on rural interprofessional simulation education in New Zealand, with the exception of a study by Gutenstein et al. (2019) on the development and evaluation of RiSC. This mixed method study used a pre-course education needs assessment to identify learning needs, a post-course evaluation and a survey 3 months after the course to identify whether lasting changes in clinical or organisational practice had occurred (Gutenstein et al., 2019). The post-course survey showed overall positive results with regards to RiSC being a valuable learning experience. The 3-month post-course survey also suggested that their learning from RiSC remained useful to participants, their teams and their organisations (Gutenstein et al., 2019). Gutenstein and colleagues concluded that further research was needed to determine if practice changes after RiSC attendance were sustained and whether there was a relationship between course participation and patient-related outcomes.

Context of the current study

The 3-day immersive course (RiSC) brings together doctors and nurses who work together in rural hospitals to receive education on emergency and trauma medicine, practise trauma skills (such as emergency thoracotomy or inserting a chest drain) and participate in simulations using a technically advanced manikin. In both the skills workshop and simulations, the nurses and doctors work with their own rural team. Each simulation begins with a pre-briefing, which aims to create a psychologically safe place for the participants to perform in front of others and concludes with a debriefing session. The room is equipped with a video camera so another rural team could watch, reflect and learn from that team's performance. The makeup of each team is typically two senior doctors and three experienced nurses. Most simulations are facilitated by three senior doctors and a senior nurse educator who work in a rural hospital.

This study explored the experiences of nurses 8 months following completion of RiSC. The 8-month timeframe allowed the researchers to investigate not only the experiences of rural nurses who undertook RiSC but also whether skill degradation had occurred over time and if the simulation experience had impacted their future clinical practice.

Methods

The researchers adopted an exploratory, descriptive qualitative design utilising semi-structured interviews. Participants were nurses who had attended RiSC and currently worked in the rural context. Nurses were chosen because, in a rural setting, they are often the first responders in a clinical emergency. Nurses also make up the majority of the emergency team, which means there is a higher possibility that they have had a chance to use the skills learnt in RiSC.

Participants were recruited through an email invitation to all of the nurses who participated in RiSC in one particular year (n = 16). If they wanted to participate, they returned the signed consent form via email and a time and setting for a face-to-face interview was determined. Six nurses participated in the study, which was conducted from December 2018 to February 2019. The audio-recorded, semi-structured interviews were conducted 8 months post RiSC. The interview guide consisted of eight questions drawn from Gum et al.'s (2010) interview schedule (see Table 1).

To allow for flexibility according to a nurse's response, the specific questions asked and their order depended on how the interview progressed. Each interview lasted approximately 45–60 minutes. After the first interview, the research team reviewed the transcript and discussed further questions that could be used to draw out relevant data in subsequent interviews.

The analysis followed a general inductive approach, which involved familiarisation with the data, open coding to identify meaning units and organisation of meaning units into subthemes and themes according to similarities in meaning (Thomas, 2006). The lead researcher (AV) transcribed each interview verbatim and undertook the first level of broad

coding. The research team then reviewed these initial codes together to derive concepts and themes. The analysis was based on the research team's interpretation of the data and was cyclical in nature, involving repeated consideration of the data in context (Thomas, 2006). Table 2 shows an excerpt from the data analysis.

Table 1

Interview Questions

Tell me about your experiences of the clinical simulation.
 How did you feel you performed in the clinical simulation?
 What were the positive outcomes of your clinical simulation experience?
 Were there any negative experiences in the clinical simulation?
 What were your thoughts about the debriefing session?
 How did you find undertaking the clinical simulation with people who you normally work with?
 How do you think your clinical simulation affected your clinical practice—do you have any examples?

In what ways has the experience of simulation influenced your teamwork?

 Table 2

 Example of Data Analysis

Interview Data	Meaning Unit	Sub Theme	Theme
When I came back from the course, we had a child that needed an IO I had only done it 2 or 3 weeks before, and I knew how to put it on, prime it and get it going.	Use of RiSC skills		Transferring skills to clinical practice
The skill mix in our team probably reflected a real honest skill mix of what we actually deal with on the ward I feel like it was so realistic.	Authenticity	Team make-up	The impact of authenticity in simulation

Ethical considerations

Ethics approval was obtained from Otago University (ref. 18/160). All participants gave written consent. Pseudonyms were used to protect the participants' identities and, for confidentiality, the specific RiSC cohort has not been identified. While AV had assisted the course facilitators as a confederate (support person) in SEIPE, she had not designed or facilitated any simulations. The other two researchers have not had any involvement with RiSC.

Trustworthiness

AV's interest in this topic stemmed from her experience as an educator in a rural hospital and having previously helped as a confederate in the simulations in RiSC. Her

observation was that team dynamics in a rural setting were complex and difficult at times, and she wanted to understand if simulations could improve interprofessional team dynamics and impact clinical practice. To manage personal assumptions from this prior experience with integrity, AV's initial interpretation of the data was discussed with the research team, who together sought to stay open to the meaning by exploring alternate explanations for the data. The themes are supported by quotations from the participants' transcripts that illustrate their perspectives.

Results

The nurses who participated in this study were all experienced rural nurses ranging in age from 25–60 years. All were female and of European ethnicity. Interview responses indicated that the nurses all valued the learning experience and used the skills they had learnt in clinical practice. However, factors such as their perception of the authenticity of the simulation and performance anxiety at the time of the course impacted their learning experience. The nurses had also observed interprofessional dynamics during the SEIPE that still existed 8 months post course. The findings are presented in five themes:

- 1. Safe, shared and practical learning opportunities
- 2. Performance anxiety
- 3. Authenticity of the SEIPE
- 4. Interprofessional dynamics
- 5. Transferring skills to nursing practice

Safe, shared and practical learning opportunities

All of the nurses valued the opportunities in RiSC to learn from other rural teams, network and make connections. This opportunity was especially appreciated because working in rural communities could be quite isolating. For Rose, it was "refreshing" to share similar work experiences and hear about how other rural environments worked. She also gave an example of how this learning had impacted her clinical practice, as she had adopted an airway management system in her hospital following collaborative discussions at RiSC:

Talking with the other teams from the other hospitals, we ended coming up with an airway kit.

For Courtney, hearing how others had navigated some of the challenges inherent in rural practice was encouraging:

It was interesting to hear about and see the other teams in action, learn from their mistakes and feel good about things that perhaps we could do differently. ... You hear all of the dynamics and dramas in their own areas and realise that you are not the only ones who have politics and headaches.

Several nurses spoke about the benefits of the practical, "hands-on" nature of the SEIPE. Rose particularly valued the chance to practise trauma skills in an environment without patient risk. For both Rose and Eva, the outcome was increased confidence to manage trauma situations in their own rural setting:

I liked the practical stuff. ... We all had a go at intubating. ... I'm a visual and practical learner, and now I know exactly what I need for an airway because I have done one. It probably helped build confidence because you are in a safe place. ... Even if it does go wrong, nothing is going to go wrong. (Rose)

I like being confident ... handling those ... situations ... just getting familiar with all of those tools again. It felt really good ... just fiddling with all of the toys and doing it and assisting somebody doing it. It was very useful. (Eva)

Courtney also valued the learning opportunity in the SEIPE, however she believed that to sustain the learning, regular simulations were required:

We probably have to have more simulations so that it is just like doing a daily chore that you don't even realise you're doing.

Performance anxiety

Several nurses spoke about feeling anxious before and during the SEIPE. This anxiety either enhanced or hindered the nurses' learning experience. For example, Eva explained that because she felt anxious in real trauma situations, feeling anxious in the SEIPE added to the learning experience:

I like scenarios that get the adrenaline going. ... It is a little bit nerve wracking, but not really, because I like to have a play with that situation as it gives you a feel of what it is like in a real scenario.

In comparison, other nurses said they worried about appearing "useless" or looking like a "fool" in front of the medical staff:

I was more nervous ... because the doctors that we were there with. ... If anything comes up in the scenario and I am useless ... that was my main worry. (Beth)

For Rose and Courtney, the anxiety was mostly related to observation of their performance by the medical staff and other rural teams. Courtney described this as being watched and analysed:

It really felt like we had been watched and analysed intensely. ... You do feel quite vulnerable there because you can make some mistakes and not do your best work and somebody has observed it and brought it out in front of the other group. (Courtney)

We are watched by another team. I thought that made me the most nervous. (Rose)

For Lily, the anxiety was mostly related to the "unknown", and for Rose, it was a fear of being judged. For both nurses, the anxiety lessened once they had experienced the SEIPE:

The first one was probably the worst; you had no idea what you were getting into. (Lily)

I think that was what I was worried about in the first place. . . . They are going to be judging us. I do not want to muck it up, but it was not like that; it was just positive feedback. (Rose)

Authenticity of the SEIPE

The environment in which the nurses completed the simulations was set up to closely replicate a resuscitation room situated in a rural hospital. Although the nurses were orientated to this room and the equipment, if the equipment was unfamiliar to the nurse or difficult to find, they perceived that this affected their performance:

I had no idea where some things were. ... That was a bit of a barrier. (Miranda)

While the nurses appreciated the effort made to imitate their usual work environment, some spoke about inconsistencies; for example, there was often a higher doctor to nurse ratio in the SEIPE team compared to their usual place of work. For both Beth and Courtney, this meant that the SEIPE was not authentic. It also meant some team members were playing roles outside of their professional scope, which impacted on their learning experience:

Not that doctors cannot do these roles, but they don't actually do those things, like drawing up drugs or running IV lines. ... It was unrealistic. (Beth)

You are distracted from the job and more focused on an unnatural role. ... If somebody is not comfortable in a role, they probably shouldn't be in a simulation doing it. (Courtney)

However, Eva suggested that it could be advantageous to have doctors stepping into the nurses' role because this may increase their understanding of the nurse's role:

The doctors placed themselves in the nursing role ... and were pleased with the positive feedback they got.

Interprofessional dynamics

Interprofessional dynamics in the teams were identified as an influential factor in the SEIPE and in the nurses' ongoing clinical practice. If the team already worked well together, the course further enhanced those relationships and trust in each other's abilities:

As a team, we found it really encouraging. I remember that they encouraged me in leadership, which is something that I would never think of doing because the doctors, in my opinion, would always be the leader. (Courtney)

We generally work pretty well together. ... I think it has definitely strengthened [our relationships] with the doctors and definitely with the nurses. (Eva)

However, the nurses also observed that interprofessional dynamics impacted the communication and collaboration within some SEIPE teams. For example, Eva observed that some teams were working separately rather than collaboratively, and Beth witnessed what she perceived was hierarchal behaviours and a doctor—nurse "divide" in some teams:

Some of them were still in the doctor-nurse role, not a shared role. (Eva)

In our working environment, I could say no. ... I don't think the other team had the ability to do that. ... Some of the other teams just seem to express a divide ... between their doctor and nurse teams. (Beth)

Miranda explained that existing dynamics in her team continued to play out in the simulation and continued to impact clinical practice 8 months after the course. She suggested that this was due to the personalities within the team:

You're not going to change people's personalities, ... either they will or they won't. Sometimes you get a good outcome, and you get a response, and sometimes you won't. It can go both ways, and I don't think you are going to change that.

Transferring skills to nursing practice

The nurses gave several examples of using the practical skills they had learnt in RiSC in their subsequent nursing practice. Particular skills mentioned were managing a patient's airway, which included sedation, managing fractures and administering intraosseous fluids. Lily and Courtney gave these examples:

We had a child that needed an IO [intraosseous fluids]. ... I had only done it 2 or 3 weeks before [in RiSC], and I knew how to put it on, prime it and get it going. (Lily)

[In my clinical setting], we had a procedural sedation, and there was [sic] about five of us involved. The GP allocated roles and asked me to be on airway. ... In my background in an emergency department, a nurse would never be on airway. ... I felt really privileged. I knew that was because [the GP] worked closely with me and trusted me and had done simulations with me and knew that I could handle the airway. (Courtney)

The nurses also gave examples of using other skills practised in RiSC, such as communication and teamwork in their clinical practice. Courtney explained that she now ensures her communication is clear and understood:

In our environment, we operate on quite loose verbal orders. ... I will [now] repeat it back to them and say, "Can you document that?" ... getting the instructions clearer and clarifying them if I'm unsure.

Rose said that after RiSC, she felt more confident to voice her concerns. Eva explained that on return to the clinical setting, the team had an enhanced understanding of each other's roles, which meant better role delegation when managing a trauma.

Discussion

Overall, the nurses believed that attending RiSC offered valuable learning opportunities that they could use in their clinical practice in the rural setting. The nurses especially appreciated the opportunity to practise trauma skills, communication and interprofessional teamwork in an environment without patient risk. This finding supports other research that learners value the chance to practise in such an environment (So et al., 2019; Zhang et al., 2011) and that compared to lecture-based education, simulation training may improve retention of knowledge and competence in clinical skills (Abe et al., 2013).

The nurses in this study spoke about increased confidence to communicate, work in teams and manage clinical situations, which other researchers have also reported (Watters et al., 2015). However, one nurse suggested that confidence might wane over time since rural trauma is infrequent. This reflects the findings of a systematic review that learners' knowledge and skills related to advanced life support begin to decrease 6 months to 1 year after training (Yang et al., 2012). This finding further supports conclusions from other studies that improving interprofessional collaboration requires multiple simulation exposures and strong institutional support (Kenaszchuk et al., 2011; Tang et al., 2013). The nurses also gave examples of using the trauma skills they had practised in RiSC in the clinical environment, which is heartening. However, further research to determine if SEIPE improves patient outcomes would be beneficial (Rutherford-Hemming & Alfes, 2017).

While the nurses valued the learning in RiSC, some were anxious about poor performance and the impact of this on their career. Van Schaik et al. (2015) reported a similar finding about doctors, suggesting that some were anxious about performing in front of expert nurses and what this might mean on their return to the clinical environment. According to Rudolph et al. (2014), participants may feel exposed and that their professional identity is threatened if they believe their performance falls short of the expected standard. Concerns such as these are legitimate, especially if the team will be working together after the SEIPE, as it may impact team trust on return to the clinical environment. Fostering a climate of trust and respect throughout the simulation and skilled facilitation in the debriefing is, therefore, of utmost importance (Rudolph et al., 2014). On the other hand, poor performance or feeling anxious may motivate practitioners to improve their clinical practice. Thus, a challenge for simulation facilitators is determining the tipping point between stress that improves learning and stress that causes participants to feel overwhelmed (Stein, 2020). Another consideration is that while taking teams out of their usual environment and offering challenging learning situations can be safe and beneficial to future practice, there is a potential risk that it may be detrimental if they are insufficiently prepared to manage poor performance in front of their peers and, consequently, take the impact of these errors back to practice. This

reinforces the need for the "safe container" in interprofessional simulation (Rudolph et al., 2014).

Creating a realistic simulation is generally considered an important design feature (Janes et al., 2020). Realism is a multidimensional attribute that encompasses physical, psychological and social aspects (Hamstra et al., 2014). This includes, for example, the willingness of the participant to suspend disbelief and participate despite the limitations of the simulated patient or environment (Muckler, 2017). An effective learning experience in simulation does not necessarily rely upon the participant believing the simulation is an authentic representation but rather a willingness to roleplay and apply their experience to the scenario (Hamstra et al., 2014). Ultimately, the learning outcomes should guide how authentic the simulation needs to be. If a learning outcome requires the participant to respond as they would in clinical practice, an authentic experience may be more likely to induce a similar emotional and psychological response (So et al., 2019). If SEIPE aims to expose participants to the interprofessional dynamic and improve communication, teamwork and leadership, a team makeup that reflects real-world practice may be necessary. However, if SEIPE aims to increase participants' understanding of the other professions, experiencing differences to the real clinical situation within the SEIPE, such as playing a role outside of their usual scope, may be a useful strategy.

Some nurses in this study observed that existing interpersonal dynamics continued to play out in the SEIPE, which has also been reported in other studies (Baker et al., 2011; Eddy et al., 2016; Van Schaik et al., 2015). According to Sharma et al. (2011), addressing risks associated with these interpersonal dynamics requires a sociological approach to IPE. This is where educators teach non-technical skills (for example collaborating, negotiating and communicating) as complex technical skills in their own right and include sociological issues, such as power, hierarchy, professional boundaries and gender, into the learning experience. A sociological approach to SEIPE requires complex scenario development to incorporate real-life interprofessional tensions, hierarchies and boundaries. For this approach to be successful, facilitators need the expertise to anticipate and manage the potential consequences of difficult discussions that may emerge in the debriefing session.

Recommendations

Participating in RiSC offers rural teams an important opportunity to practise management of trauma situations in an environment without patient risk. However, without ongoing practice, there is a risk of skill decay, particularly in the rural setting, where critical incidents may be less frequent. Although logistically, rural teams may be unable to attend RiSC yearly, consideration should be given to regular SEIPE sessions in each rural area. In addition, authenticity of the simulation may be enhanced when teams are in their own environment, and regular simulations may enable rural teams to feel more comfortable and ease feelings of nervousness.

Creating a psychologically safe environment, where participants feel they can extend themselves beyond their comfort zone, is crucial to help address potential anxiety. Strategies to foster a climate of psychological safety include orientating students to the environment, creating an atmosphere of mutual respect and trust, ensuring confidentiality and providing constructive, positive feedback (Rudolph et al., 2014). Setting expectations and goals during the pre-briefing is also recommended (Rudolph et al., 2014). However, decreasing anxiety for all participants might not be realistic, as some might find performing in front of others challenging despite every effort to make them comfortable.

Preparing the participants for the simulation by facilitating a discussion about their perceptions of each other's roles and who they expect will be the leader and why may be a useful strategy, especially if the team already works together. Encouraging a reflective discussion about the strengths and weaknesses of their team and what each participant hopes to achieve in the simulation may also be valuable. This strategy will require extra time in the briefing and a skilled, trained facilitator.

While simulations may be stressful and anxiety provoking for some, healthcare practitioners experience these emotions in clinical practice, especially when faced with critical incidents. Therefore, unintentional outcomes of anxiety or feelings of exposure could be used as learning moments by encouraging a discussion about how the participants manage these emotions in the clinical environment. Similarly, facilitators could discuss interprofessional team dynamics in relation to effective teamwork in the rural setting. For this approach to be successful, facilitators must be trained and coached into their role and prepare simulation scenarios that, while challenging, are mindful of the needs of participants who are learning as teams rather than as individuals.

Further research should include exploring the experiences of the doctors in RiSC and investigating the impact of RiSC on patient outcomes.

Limitations

This research describes the experiences of six rural nurses who participated in RiSC. Therefore, the findings may not represent the experiences of all nurses who participated. Other team members were not interviewed, and they might have offered a different perspective. The interviews were conducted 8 months after the nurses had participated in RiSC, which may have affected recall, however this timeframe meant that the nurses had time to implement what they had learnt from RiSC into their clinical practice.

Conclusion

This study employed an exploratory, descriptive design to explore the experiences of nurses in New Zealand 8 months post RiSC participation. Based on these nurses' experiences, RiSC provides valuable learning opportunities, particularly for nurses who work in relative isolation and may have less access to simulation sessions. However, there

are aspects of the SEIPE that could be further enhanced. It is hoped that the knowledge gained from these nurses' experiences will assist in refining interprofessional simulations, such as RiSC, so that ultimately, health professionals leave with greater knowledge and skills in rural trauma management that positively impact patient outcomes.

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References

- Abe, Y., Kawahara, C., Yamashina, A., & Tsuboi, R. (2013). Repeated scenario simulation to improve competency in critical care: A new approach for nursing education. *American Journal of Critical Care*, 22(1), 33–40. https://doi.org/10.4037/ajcc2013229
- Baker, L., Egan-Lee, E., Martimianakis, M. A., & Reeves, S. (2011). Relationships of power: Implications for interprofessional education. *Journal of Interprofessional Care*, 25(2), 98–104. https://doi.org/10.3109/13561820.2010.505350
- Brown, L. L., & MacKinnon, R. J. (2016). Simulation for rural communities. In V. J. Grant & A. Cheng (Eds.), *Comprehensive healthcare simulation: Pediatrics* (pp. 299–313). Springer, Cham. https://doi.org/10.1007/978-3-319-24187-6_24
- Dunnack, H. J. (2020). Health care providers' perceptions of interprofessional simulation: A metaethnography. *Journal of Interprofessional Education & Practice*, 21, Article 100394. https://doi.org/10.1016/j.xjep.2020.100394
- Eddy, K., Jordan, Z., & Stephenson, M. (2016). Health professionals' experience of teamwork education in acute hospital settings: A systematic review of qualitative literature. *JBI Database of Systematic Reviews and Implementation Reports*, 14(4), 96–137. https://doi.org/10.11124/JBISRIR-2016-1843
- Egenberg, S., Oian, P., Eggebo, T. M., Arsenovic, M. G., & Bru, L. E. (2017). Changes in self-efficacy, collective efficacy and patient outcome following interprofessional simulation training on postpartum haemorrhage. *Journal of Clinical Nursing*, 26(19–20), 3174–3187. https://doi.org/10.1111/jocn.13666
- Foronda, C., MacWilliams, B., & McArthur, E. (2016). Interprofessional communication in healthcare: An integrative review. *Nurse Education in Practice*, *19*, 36–40. https://doi.org/10.1016/j.nepr.2016.04.005
- Gergerich, E., Boland, D., & Scott, M. A. (2019). Hierarchies in interprofessional training. *Journal of Interprofessional Care*, 33(5), 528–535. https://doi.org/10.1080/13561820.2018.1538110
- Gutenstein, M., & Kiuru, S. (2018). The Matthew effect in New Zealand rural hospital trauma and emergency care: Why rural simulation-based education matters. *New Zealand Medical Journal*, 131(1476), 81–84.
- Gutenstein, M., Kiuru, S., & Withington, S. (2019). Development of a rural inter-professional simulation course: An initiative to improve trauma and emergency team management in New Zealand rural hospitals. *Journal of Primary Health Care*, 11(1), 16–23. https://doi.org/10.1071/HC18071

- Gum, L., Greenhill, J., & Dix, K. (2010). Clinical simulation in maternity (CSiM): Interprofessional learning through simulation team training. *Quality & Safety in Health Care*, 19(5), 19–19. https://doi.org/10.1136/qshc.2008.030767
- Janes, T. L., Rees, J. L., & Zupan, B. (2022). Is interprofessional education a valued contributor to interprofessional practice and collaboration within allied health in Australia and New Zealand: A scoping review. *Journal of Interprofessional Care*, 36(5), 750–760. https://doi.org/10.1080/1356182 0.2021.1975666
- Kenaszchuk, C., MacMillan, K., van Soeren, M., & Reeves, S. (2011). Interprofessional simulated learning: Short-term associations between simulation and interprofessional collaboration. BMC Medicine, 9, Article 29. https://doi.org/10.1186/1741-7015-9-29
- Madsgaard, A., Smith-Strøm, H., Hunskår, I., & Røykenes, K. (2022). A rollercoaster of emotions: An integrative review of emotions and its impact on health professional students' learning in simulation-based education. *Nursing Open*, *9*(1), 108–121. https://doi.org/10.1002/nop2.1100
- Martin, P., Pighills, A., Burge, V., Argus, G., & Sinclair, L. (2021). Promoting interprofessional education and collaborative practice in rural health settings: Learnings from a state-wide multimethods study. *International Journal of Environmental Research and Public Health*, 18(10), Article 5162. https://doi.org/10.3390/ijerph18105162
- Muckler, V. C. (2017). Exploring suspension of disbelief during simulation-based learning. *Clinical Simulation in Nursing*, *13*(1), 3–9. https://doi.org/10.1016/j.ecns.2016.09.004
- Oseni, Z., Than, H. H., Kolakowska, E., Chalmers, L., Hanboonkunupakarn, B., & McGready, R. (2017). Video-based feedback as a method for training rural healthcare workers to manage medical emergencies: A pilot study. *BMC Medical Education*, *17*, Article 149. https://doi.org/10.1186/s12909-017-0975-3
- Perron, D., Parent, K., Gaboury, I., & Bergeron, D. A. (2022). Characteristics, barriers and facilitators of initiatives to develop interprofessional collaboration in rural and remote primary healthcare facilities: A scoping review. *Rural and Remote Health*, 22(4), 756–7566. http://doi.org/10.22605/rrh7566
- Prentice, D., Taplay, K., Horsley, E., Payeur-Grenier, S., & Belford, D. (2011). Interprofessional simulation: An effective training experience for health care professionals working in community hospitals. *Clinical Simulation in Nursing*, 7(2), 61–67. https://doi.org/10.1016/j.ecns.2010.03.001
- Reeves, S., Boet, S., Zierler, B., & Kitto, S. (2015). Interprofessional education and practice guide No. 3: Evaluating interprofessional education. *Journal of Interprofessional Care*, 29(4), 305–312. https://doi.org/10.3109/13561820.2014.1003637
- Reed, K., Reed, B., Bailey, J., Beattie, K., Lynch, E., Thompson, J., Vines, R., Wong, K. C., McCrossin, T., & Wilson, R. (2021). Interprofessional education in the rural environment to enhance multidisciplinary care in future practice: Breaking down silos in tertiary health education. *Australian Journal of Rural Health*, 29(2), 127–136. https://doi.org/10.1111/ajr.12733
- Rudolph, J., Raemer, D., & Simon, R. (2014). Establishing a safe container for learning in simulation: The role of the presimulation briefing. *Simulation in Healthcare*, 9(6), 339–349. https://doi.org/10.1097/SIH.0000000000000047

- Rutherford-Hemming, T., & Alfes, C. M. (2017). The use of hospital-based simulation in nursing education: A systematic review. *Clinical Simulation in Nursing*, 13(2), 78–89. https://doi.org/10.1016/j.ecns.2016.12.007
- Sharma, S., Boet, S., Kitto, S., & Reeves, S. (2011). Interprofessional simulated learning: The need for "sociological fidelity." *Journal of Interprofessional Care*, 25(2), 81–83. https://doi.org/10.3109/13561820.2011.556514
- Sittner, B. J., Aebersold, M. L., Paige, J. B., Graham, L. L., Schram, A. P., Decker, S. I., & Lioce, L. (2015). INACSL standards of best practice for simulation: Past, present, and future. *Nursing Education Perspectives*, *36*(5), 294–298. https://journals.lww.com/neponline/fulltext/2015/09000/INACSL_Standards_of_Best_Practice_for_Simulation_.5.aspx
- So, H. Y., Chen, P. P., Wong, G. K. C., & Chan, T. T. N. (2019). Simulation in medical education. Journal of the Royal College of Physicians of Edinburgh, 49(1), 52–57. https://doi.org/10.4997/JRCPE.2019.112
- Stein, C. (2020). The effect of clinical simulation assessment on stress and anxiety measures in emergency care students. *African Journal of Emergency Medicine*, 10(1), 35–39. https://doi.org/10.1016/j.afjem.2019.12.001
- Sunguya, B. F., Hinthong, W., Jimba, M., & Yasuoka, J. (2014). Interprofessional education for whom? Challenges and lessons learned from its implementation in developed countries and their application to developing countries: A systematic review. *PloS One*, 9(5), Article e96724. https://doi.org/10.1371/journal.pone.0096724
- Tang, C., Chan, S., Zhou, W., & Liaw, S. Y. (2013). Collaboration between hospital physicians and nurses: An integrated literature review. *International Nursing Review*, 60(3), 291–302. https://doi.org/10.1111/inr.12034
- Tilley, C. P., Roitman, J., Zafra, K. P., & Brennan, M. (2021). Real-time, simulation-enhanced interprofessional education in the care of older adults with multiple chronic comorbidities: A utilization-focused evaluation. *mHealth*, 7(3). https://doi.org/10.21037/mhealth-19-216
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246. https://doi.org/10.1177/1098214005283748
- Van Schaik, S., Plant, J., & O'Brien, B. (2015). Challenges of interprofessional team training: A qualitative analysis of residents' perceptions. *Education for Health, 28*(1), 52–57. https://doi.org/10.4103/1357-6283.161883
- Watters, C., Reedy, G., Ross, A., Morgan, N. J., Handslip, R., & Jaye, P. (2015). Does interprofessional simulation increase self-efficacy: A comparative study. *BMJ Open*, 5(1), Article e005472. https://doi.org/10.1136/bmjopen-2014-005472
- Wehbe-Janek, H., Lenzmeier, C. R., Ogden, P. E., Lambden, M. P., Sanford, P., Herrick, J., Song, J., Pliego, J. F, & Colbert, C. Y. (2012). Nurses' perceptions of simulation-based interprofessional training program for rapid response and code blue events. *Journal of Nursing Care Quality*, 27(1), 43–50. https://doi.org/10.1097/NCQ.0b013e3182303c95
- Wong, A., Gang, M., Szyld, D., & Mahoney, H. (2016). Making an "attitude adjustment": Using a simulation enhanced interprofessional education strategy to improve attitudes toward teamwork and communication. *Simulation in Healthcare*, 11(2), 117–125. https://doi.org/10.1097/SIH.0000000000000133

- Yang, C. W., Yen, Z. S., McGowan, J. E., Chen, H. C., Chiang, W. C., Mancini, M. E., Soar, J., Lai, M. S., & Ma, M. H.-M. (2012). A systematic review of retention of adult advanced life support knowledge and skills in healthcare providers. *Resuscitation*, 83(9), 1055–1060. https://doi.org/10.1016/j.resuscitation.2012.02.027
- Zhang, C., Thompson, S., & Miller, C. (2011). A review of simulation-based interprofessional education. *Clinical Simulation in Nursing*, 7(4), 117–126. https://doi.org/10.1016/j.ecns.2010.02.008

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