

The EXPERIENCE of INTER-DISCIPLINARY students undertaking CARDIAC ARREST SIMULATION



BACKGROUND

Over recent years, there has been increased cross-disciplinary interest in pre-hospital care^{1, 2, 3}. There has also been increasing attention given to education through simulation⁴. Despite the novelty of this form of ‘medutainment’, and the substantial under-graduate interest in pre-hospital care, there is a lack of multi-professional, pre-hospital student simulation opportunities.

We wanted to prove that undergraduate, inter-disciplinary simulation training benefits the training clinician. Together, a group of senior paramedic and medical students planned and delivered one day’s high fidelity student simulation training focusing on the in- and out-of hospital management of a cardiac arrest patient.

The event aimed to:

- Explore current guidance for in- and out-of- hospital cardiac arrest
- Provide inter-disciplinary, high-fidelity simulation wherein students adopt the role of their colleagues
- Highlight the importance of non-clinical skills
- Minimise the potential for future inter-disciplinary prejudice through collaborative learning
- Consider future clinical and technological developments in the management of cardiac arrest



METHODS

Each delegate participated in a real-time, high fidelity moulage wherein they acted both within and outside of their profession, managing a cardiac arrest patient out-of hospital before transitioning the care into hospital—the later including both a phase in the resuscitation room followed by primary percutaneous coronary intervention suite. When not directly participating , delegates watched their peers via live video link.

Delegates then participated in peer-to-peer debrief facilitated by qualified clinical mentors.

In order to evaluate the efficacy of this novel, student-devised intervention, delegates completed identical pre- and post- event questionnaires containing both quantitative and white space questions. Data was then input onto an excel spreadsheet, and analysed using both quantitative methods and thematic framework techniques.



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RESULTS

Overall, there was increase in confidence in cardiac arrest management as well as an increase in delegates’ belief in the importance of collaborative learning.

Some key outcomes:

- Mean increase of 17.83% in confidence in working as part of a resuscitation team
- Mean increase of 25.33% in confidence in the principles of team resource management during a cardiac arrest
- Large increases in the understanding of the principles of cardiac arrest management in- and out-of hospital

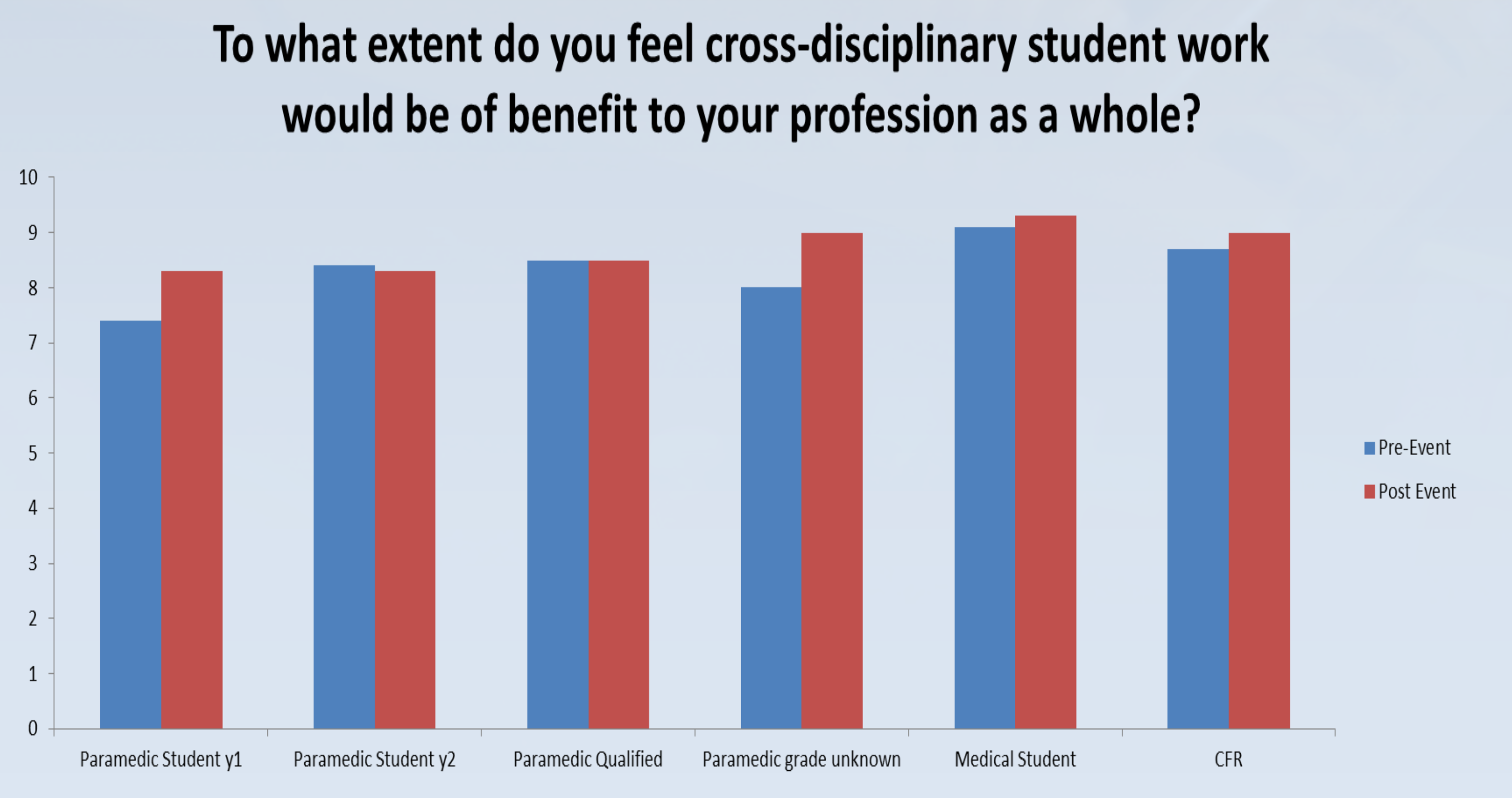
The greatest increase in clinical knowledge was demonstrated in those with less experience and was noticeably higher in the area of care in which the delegate was not training (i.e. in-hospital care for paramedic students and vice versa).

Concerning appreciation for human factors in a resuscitation team, delegates commented that “greater teamwork leads to better patient care”, and “better team interactions equal better outcomes”.

Delegates also commented that understanding the “strengths and limitations of [their] clinical colleagues” better helps them “understand [their] place within the wider healthcare team”, and that working with their multi-professional colleagues in this way helps them “improve [their] communication and clinical skills as each profession has something different to share”.

Overall, delegates felt this type of inter-disciplinary work benefitted their profession as a whole (figure 1).

Figure 1: To what extent do you feel cross-disciplinary student work would be of benefit to your profession as a whole?



DISCUSSION

Overall, this event demonstrated that undergraduate students garner tremendous knowledge, inter-disciplinary understanding and respect from such an educational intervention. We believe that this student devised and led event was unique in its delivery and audience, and by participating, students learnt about both the medical management of cardiac arrest, but perhaps more so their role and professional identity within the wider healthcare team. It also allowed them to appreciate their, and their colleagues’, strengths and limitations. We hope this combination may contribute to the cultural change moving towards a more collaborative healthcare system.

In future, we hope to survey delegates for long-term behavioural and attitudinal change, and we hope to run similar events to share the merit of this unique and exciting work.

References:

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