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Inspiring Australian Life-Science Related Undergraduates to Careers in Healthcare: A Longitudinal Study of the Impact of MED-E-SIM (Graduate Entry) Pilot Programme.

Alberto Au
RMH Clinical Simulation Centre, The Royal Melbourne Hospital, Australia, alpedro71@hotmail.com

Louise Palmer
RMH Clinical Simulation Centre, The Royal Melbourne Hospital, Australia

Catherine Carbery
Medical Workforce, St Vincent's Hospital (Melbourne), Australia

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Inspiring Australian Life-Science Related Undergraduates to Careers in Healthcare: A Longitudinal Study of the Impact of MED-E-SIM (Graduate Entry) Pilot Programme

Alberto Au [a],*, Louise Palmer [a], Catherine Carbery [b]

[a] RMH Clinical Simulation Centre, The Royal Melbourne Hospital, Australia
[b] Medical Workforce, St Vincent's Hospital (Melbourne), Australia

Abstract

Purpose: We have previously reported that a one-day educational programme could help strengthen Australian senior secondary school students' decision to pursue a health-related career. Given that graduate-entry pathway, following a life-science related undergraduate degree, is becoming the common entry pathway to healthcare degree in Australia, the need for an educational programme specifically designed for life-science related undergraduates interested in pursuing a career in healthcare is crucial. To address this gap, MED-E-SIM (Graduate Entry) pilot programme was designed and implemented.

Method: MED-E-SIM (Graduate Entry) is a one-day educational programme aimed at inspiring Australian life-science related undergraduates in pursuing healthcare professions through immersive and simulated learning. To evaluate the impact of MED-E-SIM (Graduate Entry), 55 life-science related undergraduates who participated in the programme were invited to complete the post programme evaluation survey. Participants were also interviewed shortly after the completion of their life-science related undergraduate degree to confirm their healthcare career pursuit status.

Results: We observed significant increases in students' certainty in pursuing healthcare career ($P < 0.001$) immediately after the completion of MED-E-SIM (Graduate Entry) programme. Follow-up interview data showed 55.10% of respondents reported to have succeeded in enrolling into a medicine or healthcare related entry-to-practice degree after the completion of their life-science related undergraduate degree. Out of those not enrolled into a subsequent entry-to-practice healthcare degree, 38.78% expressed to be still considering or pursuing a future career in healthcare.

Discussion: MED-E-SIM (Graduate Entry) programme can be used as a feasible strategy to increase life-science related undergraduates' pursuit in healthcare careers and ultimately help alleviate the alarming worldwide shortage of healthcare workers faced within the next decade.

Keywords: Career pursuit, Healthcare, Life-science, Undergraduates, Simulation education

1. Introduction

The World Health Organization (WHO) projects that the worldwide healthcare workers' shortage could exceed 18 million by year 2030 [1]. Similarly, Australia's demand for healthcare workers is projected to continue to exponentially exceed supply, with a deficit of 123,000 nurses and 5000 doctors by year 2030 [2,3].

It is well recognised that promoting awareness and interest is essential to guide academic and career pursuits [4]. Previous studies have demonstrated that a motivational programme can have positive effects in inspiring secondary school and undergraduate premedical students in pursuing a career in health [5—8]. Freischlag [9] also suggested that immersion experiences may be especially important for individuals from non-medical and/or financially disadvantaged background.

We have previously reported that a one-day educational programme (MED-E-SIM) incorporating immersive and simulated learning could help strengthen Australian senior secondary school students' decision to pursue a health-related career [10].

However, graduate-entry pathway, following a life-science related undergraduate degree (LSRUD), is becoming the common entry pathway into most medical and some health science schools in Australia [11−15]. Therefore, the need for an educational programme specifically designed for Australian life-science related undergraduates (LSRUs) interested in pursuing a career in healthcare may be particularly important. Common LSRUDs offered in Australia include: Bachelor of Biomedicine (aka Bachelor of Biomedical Science) and Bachelor of Science.

To address this gap, MED-E-SIM (Graduate Entry) was designed and implemented. MED-E-SIM (Graduate Entry) is a one-day educational pilot programme aimed at inspiring Australian LSRUs in pursuing future study and career in healthcare.

The core curriculum of MED-E-SIM (Graduate Entry) involves promoting interest in healthcare amongst LSRUs through simulated clinical experiences, group discussions and active dialogue with multi-professional healthcare experts.

The goal of the current study was to evaluate both the immediate effect of MED-E-SIM (Graduate Entry) programme in inspiring Australian LSRUs interested in pursuing a career in healthcare, and the downstream effects of this programme upon their science undergraduate degree completion.

2. Methods

2.1. Participant selection and characteristics

Between July 2019 and December 2019, three MED-E-SIM (Graduate Entry) programmes were delivered. The programme was advertised using online event ticketing platform Trybooking Pty Ltd. Students were eligible to enroll in the MED-E-SIM (Graduate Entry) programme if they (1) were currently studying a LSRUD (in their 1st through to 3rd academic year) and interested in pursuing a future career in medicine/healthcare; and (2) resided in Victoria (Australia) at the time of enrolment. Participants were considered to be LSRUs if they were currently enrolled in Bachelor of Biomedicine, Bachelor of Science with life-science related major subjects or other scientific bachelor degrees (e.g. Bachelor of Pharmaceutical Science) with life-science related major subjects.

55 LSRUs participated in MED-E-SIM (Graduate Entry) programme and all participants were 18 years of age and above. Informed consent for programme participation, evaluation, and follow-up interview (after undergraduate degree completion) was obtained prior programme commencement. Ethics approval was obtained from the Human Research Ethics Committee at the Melbourne Health, Australia.

2.2. MED-E-SIM (Graduate entry) programme

Details and format of MED-E-SIM programme have been previously described [10]. Briefly, MED-E-SIM (Graduate Entry) is a not-for-profit, one-day educational pilot programme held at a major tertiary trauma hospital in Melbourne, Australia. The programme normally started at 9:00 AM and adjourned by 2:30 PM and it included six major learning activities. Table 1 shows a sample MED-E-SIM (Graduate Entry) syllabus. The intended learning outcomes of these six learning activities had been carefully adapted from previous programme [10] to suit the current special cohort of LSRUs.

Although the syllabus activities remained the same, unlike previous programme [10], more advanced science concepts of anatomy, physiology, pathology and pharmacology were presented and discussed with the participants during MED-E-SIM (Graduate Entry) Learning Activity 1 to 5 (Table 1).

Table 1. MED-E-SIM (Graduate Entry) syllabus.

	Activity Detail:	Special Topic(s) for Discussion (LSRUs specific)
Learning Activity 1	Hospital Guided Tours − Intensive Care Unit (ICU) and Emergency Department (ED) tours	Principles of emergency and trauma care. Overview and management of multiple organ failure.
Learning Activity 2	Clinical skill workshop A - Basic Life Support (BLS)	Human heart anatomy and physiology. Principles of cardiac action potential.
Learning Activity 3	Clinical skill workshop B − Intravenous Cannulation (IVC)	Overview of human circulatory system and intravenous pharmacokinetics.
Learning Activity 4	Clinical skill workshop C − Nasogastric Tube (NGT) Insertion	Overview of functional anatomy of the human digestive system.
Learning Activity 5	Anaphylaxis Simulation Exercise	Pathophysiology of anaphylaxis. Adrenergic pharmacology.
Learning Activity 6	"Ask the expert" Masterclass	Course application and study tips.

During the "ask the expert" Masterclass (Activity 6), a special emphasis was placed on the discussion around enrolment preparation and study tips for this unique group of participants. To ensure a diverse range of tips and advices were offered to the participants, the master class panel would always consist the following personnel: a medical student; a junior doctor; a medical consultant; a registered nurse; a clinical nurse educator; a health director; an academic teaching specialist and a member from the allied health team.

2.3. Post-programme evaluation form

The post-programme evaluation forms were distributed to participants after conclusion of the programme. The form included a set of 10 multiple-choice questions and was intended to examine the participants' self-perception in three areas of interest: (1) the participants' health profession preference, (2) programme's content suitability, and (3) programme's impact and recommendability (Appendix A). No personal data were collected in the post-programme evaluation form, and the results were analysed only as a group, not individually.

2.4. Follow-up interview (post-LSRUD completion)

The goal of the current study was also to examine the long-term effects of MED-E-SIM (Graduate Entry) programme in inspiring LSRUs interested in pursuing a career in healthcare. Participants were contacted by mobile telephone approximately at two months after completion of their LSRUD to complete a brief structured telephone interview to confirm their healthcare career pursuit status (Appendix B). Participants were given an option to decline the interview.

Up to three telephone attempts were made for each participant, with each of these attempts being at five to seven days apart. Unresponsive participants, after three telephone attempts, were then invited to participate in the follow-up interview electronically via the email form. Participants not responding to telephone nor the email were then finally considered as lost to follow up (LTFU) (Fig. 1).

2.5. Data analysis

Post-programme evaluation surveys were successfully obtained from all 55 participants enrolled in the programme. Data were collected anonymously, with each survey being assigned a unique identifier code that devoid of any association with personal or contact information. The weight of responses was measured using a 5-point Likert scale [16], ranging from "strongly disagree" to "strongly agree" or "very uncertain" to "very certain", and descriptive data were presented as count, percentage, mean and standard deviation (SD).
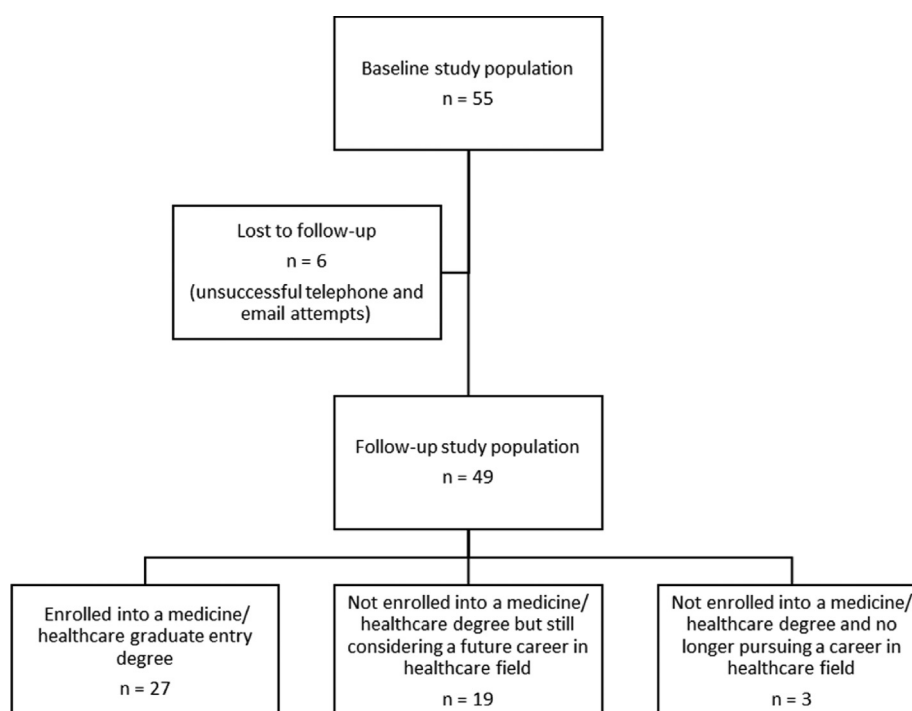

Fig. 1. Study flow diagram of baseline and follow-up of enrolled participants.

Within the post-programme evaluation survey, participants were also asked to rate their level of certainty in pursuing their nominated healthcare career of interest before and after attending MED-E-SIM (Graduate Entry) programme (Appendix A). Participants' certainty in pursuing health profession was analysed using the paired t-test, where P values of <0.05 reflected statistical significance between pre-to post-programme participation.

Follow-up interview data were presented in terms of count and percentage of total respondents. All data were compiled in Microsoft Excel 2016 and statistical analyses were conducted using STATA (version 17.0).

3. Results

3.1. Participants' characteristics

The mean participant age at programme enrollment was 19.47 years (SD 1.18 years; n = 55). Most participants were studying Bachelor of Biomedicine (87.27%) and were enrolled at the University of Melbourne (94.55%). The proportion of first, second and third year LSRUD students were similar in this study (30.91%, 34.55% and 34.55% respectively) (Table 2).

3.2. Health profession preference

When participants were asked to indicate which health profession they were interested in pursuing upon their LSRUD completion, the overwhelming majority (92.73%) indicated their preference to be medicine (Table 3). There was also a small proportion of participants who expressed dual (Medical-Nursing and Medical-Allied Health) and multiple health profession preferences (Medical, Nursing and Allied Health).

Table 2. Participants' characteristics at programme enrollment.

Characteristic	Total
	N = 55
Age (years), mean (SD)	19.47 (1.18)
University, n (%)	
Monash University	3 (5.45%)
The University of Melbourne	52 (94.55%)
Enrolled degree, n (%)	
Bachelor of Biomedicine	48 (87.27%)
Bachelor of Science	6 (10.91%)
Bachelor of Pharmaceutical Science	1 (1.82%)
Year of study, n (%)	
First	17 (30.91%)
Second	19 (34.55%)
Third	19 (34.55%)

Abbreviation(s): SD = Standard Deviation.

Table 3. Participants' evaluation of MED-E-SIM (Graduate Entry) programme.

Question	Total
	N = 55
1. The content of the programme was pitched at an appropriate level for my learning, mean (SD)	4.62 (0.53)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	0 (0.0%)
Neutral, n (%)	1 (1.82%)
Agree, n (%)	19 (34.55%)
Strongly agree, n (%)	35 (63.64%)
2A. Today's programme has improved my knowledge about epipen, mean (SD)	4.20 (0.85)
Strongly disagree, n (%)	1 (1.82%)
Disagree, n (%)	0 (0.0%)
Neutral, n (%)	9 (16.36%)
Agree, n (%)	22 (40.00%)
Strongly agree, n (%)	23 (41.82%)
2B. Today's programme has improved my confidence in using epipen, mean (SD)	4.44 (0.76)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	1 (1.82%)
Neutral, n (%)	6 (10.91%)
Agree, n (%)	16 (29.09%)
Strongly agree, n (%)	32 (58.18%)
3A. Today's programme has improved my knowledge about Basic Life Support, mean (SD)	4.40 (0.74)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	1 (1.82%)
Neutral, n (%)	5 (9.09%)
Agree, n (%)	20 (36.36%)
Strongly agree, n (%)	29 (52.73%)
3B. Today's programme has improved my confidence in performing Basic Life Support, mean (SD)	4.44 (0.69)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	0 (0.0%)
Neutral, n (%)	6 (10.91%)
Agree, n (%)	19 (34.55%)
Strongly agree, n (%)	30 (54.55%)
4. Today's programme has improved my understanding about the health profession, mean (SD)	4.56 (0.50)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	0 (0.0%)
Neutral, n (%)	0 (0.0%)
Agree, n (%)	24 (43.64%)
Strongly agree, n (%)	31 (56.36%)
5A. Which health profession are you interested in pursuing? n (%)	
Medical	51 (92.73%)
Nursing	6 (10.91%)
Physiotherapy	5 (9.09%)
Speech pathology	2 (3.64%)
Optometry	2 (3.64%)
Dentistry	2 (3.64%)
Audiology	1 (1.82%)
5B. Rate your level of certainty in pursuing this profession - Before attending MED-E-SIM (Graduate Entry), mean (SD)	4.11 (0.74)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	1 (1.82%)

Table 3. (continued)

Question	Total
	N = 55
Neutral, n (%)	9 (16.36%)
Agree, n (%)	28 (50.91%)
Strongly agree, n (%)	17 (30.91%)
5C. Rate your level of certainty in pursuing this profession - After attending MED-E-SIM (Graduate Entry), mean (SD)	4.51 (0.60)
Strongly disagree, n (%)	0 (0.0%)
Disagree, n (%)	0 (0.0%)
Neutral, n (%)	3 (5.45%)
Agree, n (%)	21 (38.18%)
Strongly agree, n (%)	31 (56.36%)
6. I would recommend this programme to other life-science related undergraduates wishing to pursue a career in health industry, n (%)	
Agree	55 (100.00%)
Disagree	0 (0.0%)

Abbreviation(s): SD = Standard Deviation.

3.3. Programme content suitability

Table 3 shows quantitative data reflecting participants' evaluation of MED-E-SIM (Graduate Entry) programme content suitability. The vast majority of participants agreed or strongly agreed that the content covered in MED-E-SIM (Graduate Entry) were appropriate for their learning and the programme has improved their understanding about the health profession.

This positive response is similarly observed when participants were asked to evaluate the clinical content, Basic Life Support (BLS) skills workshop and EpiPen® administration, covered in the programme. Most respondents reported that the clinical content covered in the programme has improved both their knowledge and confidence in performing BLS and administering EpiPen®.

3.4. Programme impact and recommendability

To determine whether participation in MED-E-SIM (Graduate Entry) programme could strengthen the LSRUs' decision in pursuing future healthcare study and career, participants were asked to rate their level of certainty in pursuing their nominated healthcare career of interest before and after attending MED-E-SIM (Graduate Entry). Response data were analysed using the paired t-test, and significant increases in students' certainty in pursuing healthcare career were detected (estimated mean difference 0.4, 95% confidence interval 0.24 to 0.56, $P < 0.001$).

From the recommendability perspective, 100% of participants unanimously indicated they would recommend MED-E-SIM (Graduate Entry) programme to other LSRUs wishing to pursue a career in the healthcare industry (Table 3).

3.5. Participants' characteristics at follow-up (post-LSRUD completion)

Of the 55 participants who participated the MED-E-SIM (Graduate Entry) programme, six (10.91%) were LTFU (Fig. 1). Participants' characteristics at follow up (post-LSRUD completion) are shown in Table 4.

55.10% of respondents reported to have succeeded in enrolling into a medicine or healthcare related entry-to-practice degree after the completion of their LSRUD. The majority of those who enrolled into an entry-to-practice degree had chosen to study Doctor of Medicine (70.37%). Additionally, The University of Melbourne was the most cited chosen academic provider (77.78%).

Out of those not enrolled into a subsequent entry-to-practice healthcare degree, 38.78% expressed to be still considering or pursuing a future career in healthcare. Only 6.12% of respondents indicated during follow-up that they were not enrolled into an

Table 4. Participants' characteristics at follow up (post-LSRUD completion).

Characteristic	Total
	N = 49
Follow-up status, n (%)	
Succeeded in enrolling into a medicine/ health related entry-to-practice degree	27 (55.10%)
Not enrolled but still considering/ pursuing further study/career in medicine (or health related field)	19 (38.78%)
Not enrolled and no longer pursuing further study/career in medicine/health	3 (6.12%)
Participants succeeded in enrolling into medicine/health related entry-to-practice degree (N=27)	
Enrolled entry-to-practice degree, n (%)	
Doctor of Dental Surgery	2 (7.41%)
Doctor of Medicine	19 (70.37%)
Doctor of Optometry	1 (3.70%)
Doctor of Physiotherapy	1 (3.70%)
Master of Clinical Audiology	1 (3.70%)
Master of Nursing	2 (7.41%)
Master of Speech Pathology	1 (3.70%)
University, n (%)	
Bond University	1 (3.70%)
Deakin University	1 (3.70%)
Monash University	1 (3.70%)
The University of Melbourne	21 (77.78%)
The University of Queensland	1 (3.70%)
The University of Western Australia	1 (3.70%)
University of Wollongong	1 (3.70%)

Of the 55 participants who responded to the anonymous MED-E-SIM (Graduate Entry) post-programme evaluation form, 6 (10.91%) participants were lost to follow-up.

entry-to-practice degree and no longer wished to pursue a career in healthcare.

4. Discussion

To the best of our knowledge, the MED-E-SIM (Graduate Entry) was one of the first educational programmes in Melbourne (Victoria), Australia, aimed at inspiring LSRUs in pursuing future career in healthcare. This paper demonstrated that an educational programme incorporating immersive and simulated learning like MED-E-SIM (Graduate Entry) could help strengthen LSRUs' immediate decision to pursue a healthcare-related career. This finding is highly concordant with our previous study of senior secondary student cohort [10].

The effect of MED-E-SIM (Graduate Entry) is also aligned with most international studies [7,8]. Hernandez et al. [7] reported the impact of an introductory summer programme offered to undergraduate students interested in medical careers and demonstrated that 92% of programme graduates developed more favourable opinions of a career in medicine. Similarly, Thang et al. [8] observed 89% of their introductory programme graduates strongly agreed that they had become more interested in pursuing a career in medicine because of programme participation.

As with our previous work [10], the core curriculum of MED-E-SIM (Graduate Entry) involves promoting interest in healthcare amongst participants by triggering Situational Interest (SI). SI is defined as the interest experienced in particular circumstances or moment by a learner [17]. It can foster powerful affective reactions and perceived values, which can then directly promote ongoing engagement and persistence [18—20].

The present study confirms that not only MED-E-SIM (Graduate Entry) can help increase participants' certainty in pursuing a healthcare career immediately post programme completion, but also create lasting commitment in participants' career pursuit.

Upon evaluating the long-term effect of MED-E-SIM (Graduate Entry), we observed that about 55% of respondents had demonstrated clear persistence in their chosen health career pursuit, and subsequently succeeded in enrolling into a medicine or healthcare related entry-to-practice degree.

In Australia, it is well documented that health-related degrees have the lowest attrition rates [21]. For example, the Australian medical school attrition rate remained at projected 2.9% in both 2020 and 2021 [22,23]. Therefore, it is reasonable to assume that the vast majority of our follow-up respondents who reported to have succeeded in enrolling into a medicine or healthcare related entry-to-practice degree, will indeed complete the degree and enter the pursued health profession.

It is also worth to note that the clinical skills workshops and simulation exercise delivered in MED-E-SIM (Graduate Entry) enabled students to gain improved knowledge and confidence in performing crucial life-saving skills such as first aid and BLS.

Our current study shows that medicine was the most preferred and pursued degree/career amongst the LSRUs who participated in the MED-E-SIM (Graduate Entry) programme. On the contrary, our previous work indicated nursing to be cited as the most preferred career when the programme was aimed at senior secondary school student cohort [10]. The observed common preference to pursue medicine amongst our MED-E-SIM (Graduate Entry) programme participants may be highly due to the participants' characteristics.

In Australia, the Bachelor of Biomedicine degree is commonly considered as a "good preparation degree" for the graduate entry Doctor of Medicine degree [24,25]. Given that 87.27% of MED-E-SIM (Graduate Entry) participants were enrolled in studying Bachelor of Biomedicine, the observed explicit preference to pursue medicine was rather not surprising.

Although, the MED-E-SIM (Graduate Entry) programme was advertised to all eligible LSRUs who resided in Victoria (Australia), the enrolment demonstrated a clear geographical preference. 94.55% of MED-E-SIM (Graduate Entry) programme participants were studying at the nearby precinct university, The University of Melbourne, of close proximity with <500 m walking distance.

Out of those respondents who reported to have succeeded in enrolling into a medicine or healthcare related entry-to-practice degree after the completion of their LSRUD, 77.78% were enrolled at this same nearby precinct university. Based on this observation, the authors have reasons to believe that programmes like MED-E-SIM (Graduate Entry) can be employed as a future healthcare student recruitment strategy by universities through the meaningful partnership with the local precinct hospitals. Furthermore, the programme will also directly provide a multitude of professional and personal development to all personnel who will be involved.

Motivational programmes that successfully offered positive effects in inspiring undergraduate students interested in careers in medicine can be found in several international studies, however,

many of them required multiple sessions and attendances [7,8]. The need for a less time commitment intensive programme may be particularly important for the Australian context, as 80% of Australian domestic undergraduate students reported to have a job while studying and many also reported their finances to be a source of constant worry [26]. As such, the one day format of MED-E-SIM (Graduate Entry) programme may offer the additional benefit of being less time commitment intensive and less impactful to the students' work and study commitment.

Given the overwhelming shortage of healthcare workers projected globally within the next decade, it is vital to develop measures to increase the future pool of healthcare workers. This study documents that programmes like MED-E-SIM (Graduate Entry) could be a feasible strategy to increase LSRUs' pursuit in medicine or healthcare related field.

4.1. Limitations

The current study has several limitations that need to be considered. Firstly, the participants in this study were recruited from only one Australian state (Victoria), and hence the study population may not accurately reflect the LSRUs of other states in Australia and/or internationally.

Secondly, the current study did not conduct further follow up on those respondents who reported, at completion of their LSRUD, not to be enrolled in a subsequent healthcare entry-to-practice degree but were still considering a future career in healthcare. It is not known whether these individuals may later succeed in enrolling into a medicine or healthcare related entry-to-practice degree, or, decide that they no longer wish to pursue a career in healthcare. Future studies should take this into account and incorporate multi-stage longitudinal analyses into their study design.

Lastly, the COVID19 pandemic enforced lockdowns and social distancing restrictions have presented multitude of interruptions to the healthcare and education system [27,28], and accelerated the demand for contactless learning platforms. Future studies should take this into account and explore the role of using contactless education strategies, such as augmented and virtual reality simulations, within their curriculum design and format.

5. Conclusion

In conclusion, the authors collaboratively designed and implemented a novel one-day educational programme named MED-E-SIM (Graduate Entry) in an attempt to inspire Australian LSRUs in pursuing future study and career in healthcare. Findings from this study suggest that MED-E-SIM (Graduate Entry) can not only offer positive learning experience but, more importantly, the programme can also help strengthen participants' decision in pursuing a healthcare career.

Programme such as this may be used as a feasible strategy to increase LSRUs pursuit in healthcare careers and ultimately help alleviate the concerning worldwide shortage of healthcare workers faced within the next decade.

Appendix A.

MED-E-SIM (Graduate Entry) Programme Evaluation Questions.

Question	Response Options
1. The content of the programme was pitched at an appropriate level for my learning.	Strongly Agree
2a. The programme has improved my knowledge about EpiPen®.	Agree
2b. The programme has improved my confidence in using EpiPen®.	Neutral
3a. The programme has improved my knowledge about BLS.	Disagree
3b. The programme has improved my confidence in performing BLS.	Strongly Disagree
4. The programme has improved my understanding about the health profession.	
5a. Which health profession are you interested in pursuing?	Medical
	Nursing
	Allied Health (please specify)
5b. Please rate your level of certainty in pursuing the health profession indicated in	Very Certain
5a, **before** attending MED-E-SIM (Graduate Entry).	Certain
5c. Please rate your level of certainty in pursuing the health profession indicated in	Neutral
5a, **after** attending MED-E-SIM (Graduate Entry).	Uncertain
	Very Uncertain
6. I would recommend this programme to other life-science related undergraduates wishing to pursue a career in the health industry.	Agree
	Disagree

Appendix B.

MED-E-SIM (Graduate Entry) follow-up interview tool.

Question	Response
Since the completion of your life-science related undergraduate degree, what is your current healthcare career pursuit status?	1. Succeeded in enrolling into a medicine/health related entry-to-practice degree. *If option 1 is selected, the interviewee is asked to provide:* 1.1. Name of the Course 1.2. Name of the University 2. Not enrolled into a medicine/health related entry-to-practice degree; but still considering a future career in medicine or health related field. 3. Not enrolled into a medicine/health related entry-to-practice degree; and no longer pursuing a career in medicine or health related field. 4. Did not wish to discuss and decline interview.

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