

Introduction of an interprofessional gynaecology surgical skills workshop for undergraduate medical and nursing students

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Introduction

A substantial number of undergraduate medical students¹ and first-year junior doctors² report feeling under-prepared to perform basic surgical and gynaecology procedures. Nursing students also report receiving insufficient opportunity for “hands-on” learning on clinical placement³. Lack of practical experience may limit graduate’s ability to be “surgically safe” in clinical practice². Gynaecology is a surgically-focused field. Obstetrics and gynaecology residents are expected to have the theoretical and practical skills necessary for clerking, consenting patients, and assisting during surgery.

Procedural skills taught in a simulated, best-practice model have been found to be more effective than traditional ‘see one, do one, teach one’ approach⁴. Procedural skills programs also provide the opportunity to foster interprofessional collaboration between students⁵. Interprofessional education (IPE) fosters positive relationships between healthcare students and encourages shared learning⁶, leading to safer patient care.

Integration of IPE and procedural skills has been investigated. Simulation-based procedural skills teaching improved medical and nursing students’ confidence, knowledge, and procedural skills⁷. Students’ interprofessional attitudes and behaviours improved following IPE programs⁸.

Evidence for integrated, simulation-based procedural/surgical skills programs and interprofessional education programs specifically for undergraduate students is scant⁸. Furthermore, no study so far has evaluated the value of integrated IPE and gynaecological surgical skills teaching.

Objectives

A novel interprofessional, gynaecological surgical skills workshop (GSW) was introduced at Monash University, Australia.

The aim of this pilot study was to explore students’ perceptions of an integrated simulation based, interprofessional, gynaecological surgical skills program, using students’ pre and post-workshop confidence in taught surgical skills as an outcome measure.

This project also explores students’ perspectives of overall surgical education and IPE throughout their undergraduate course.

Methods

160 undergraduate medical ($n = 133$) and volunteer nursing ($n = 27$) students attended the pilot workshop program at Monash University, Australia.

Students attended a single, two-hour workshop with simulated, supported practice of common surgical skills. The four skills stations were: 1) aseptic gowning/gloving, 2) suturing, 3) intrauterine device insertion and surgical instrument familiarisation, 4) female catheterisation. Nursing and medical facilitators provided teaching, demonstrations, and provided feedback on student performance.

An anonymous paper-based survey was completed by students after the workshop.

Descriptive statistics for the data were created using SPSS Statistics Program. A Wilcoxon Signed-Rank test was performed to compare pre and post-workshop student confidence in taught procedural skills and interprofessional approach to clinical practice.

Results

160 students (133 medical and 27 nursing) attended and 100% completed the survey. Number of prior medical surgical workshops: medical mean 2.9, nursing mean 0.2

Number of prior medical interprofessional workshops: medical mean 0.8, nursing mean 0.4

58% medical ($n=56$) and 37% nursing ($n=17$) students reported that surgical skills education was not well-taught through their undergraduate course. 86% of medical ($n=115$) and 96% nursing ($n=26$) student agreed their course should provide more practical surgical skills education, such as this workshop program.

68% of medical students vs. 93% of nursing students perceiving a benefit from the workshop having an interprofessional focus.

A Wilcoxon Signed-Rank Test indicated that post-workshop confidence scores were statistically significantly higher than pre-workshop confidence scores for both medical and nursing student cohorts for all four taught skills. Confidence in interprofessional approaches to clinical practice improved significantly in medical students only after the workshop.

Mean student cohort self-reported confidence scores (pre and post workshop)

Surgical/procedural skill	Cohort	Pre-workshop		Post-workshop	
		Mean	SD	Mean	SD
Gowning/gloving	Medical	3.59	1.091	3.85	0.836
	Nursing	3.32	0.988	4.46	0.706
Suturing	Medical	3.12	1.176	3.65	0.825
	Nursing	2.64	1.364	4.12	0.850
Catheterization and IUD placement	Medical	2.12	1.124	3.81	1.000
	Nursing	3.76	0.831	4.35	0.977
Interprofessional behaviours	Medical	3.68	0.828	3.83	0.741
	Nursing	3.85	1.008	4.04	0.824

Difference in pre-workshop vs. post-workshop student confidence scores (Wilcoxon Signed-Ranks test)

Surgical/procedural skill	Cohort	Z-score	P-value
Gowning/gloving	Medical	-2.033	0.042*
	Nursing	-3.399	0.001*
Suturing	Medical	-4.470	<0.001*
	Nursing	-3.443	0.001*
Catheterization and IUD placement	Medical	-8.794	<0.001*
	Nursing	-2.222	0.026*
Interprofessional behaviour	Medical	-2.693	0.007*
	Nursing	-1.890	0.059

*denotes a statistically significant result of $p < 0.05$

Conclusion

Integrated simulation-based, interprofessional, gynaecological surgical procedural skills workshops may be considered for inclusion into undergraduate medical and nursing curricula.

This pilot program was well accepted by both medical student and nursing student cohorts, and also significantly improved student confidence in procedural skills post the workshop program.

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