Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Teaching for transfer through simulation based training.

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Collaborators

Ms Amy Gillis
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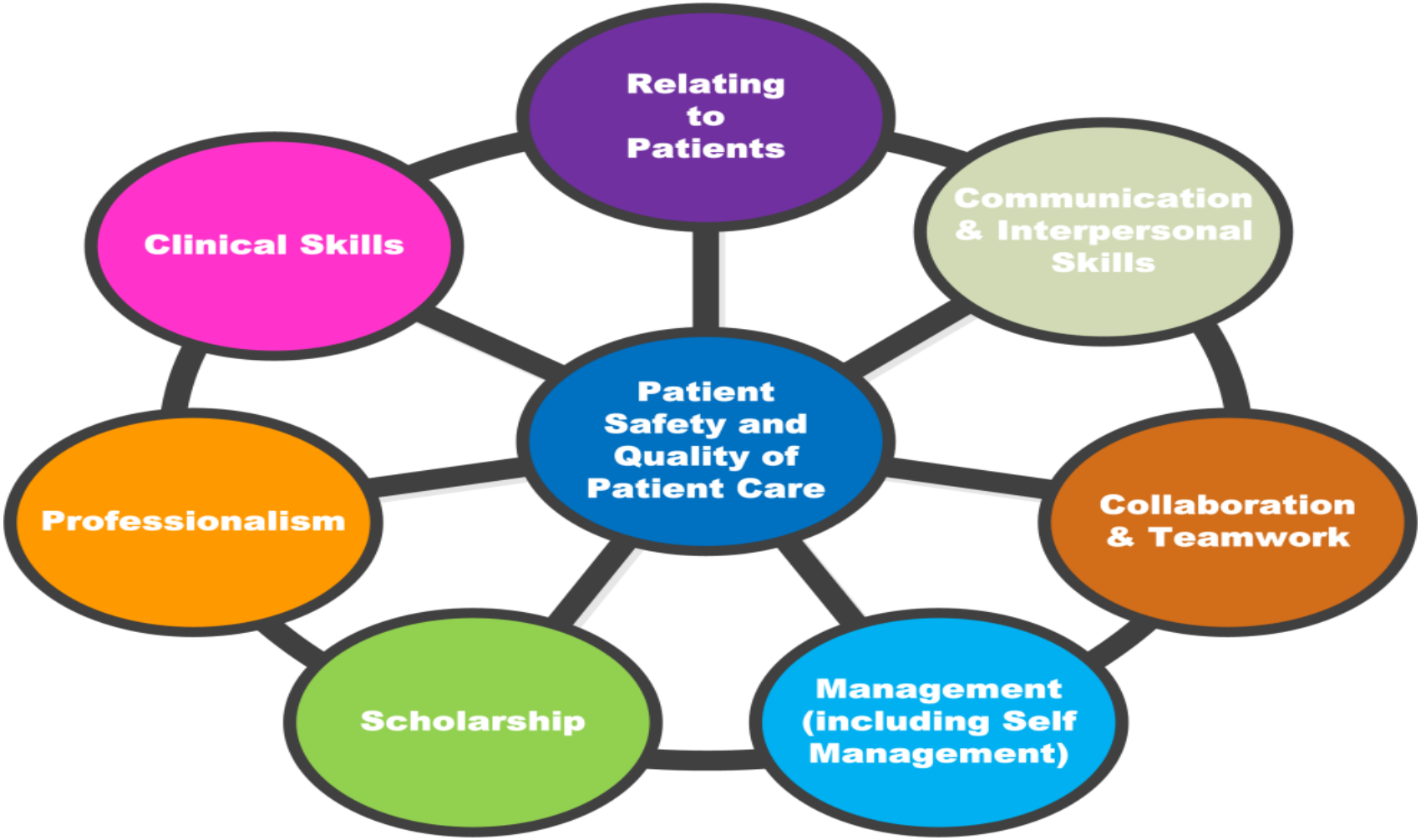
Ethical Considerations

The School of Medicine, Faculty of Health Sciences Research and Ethics Committee University of Dublin Trinity College approved this project. Written informed consent was gained from all participants to utilise the data collected for research and publication.

Undergraduate Teaching Governance



Domains of Professional Practice (Adapted Irish Medical Council, 2014)

Research Aims

- To quantify final year students confidences in managing common surgical clinical presentations.

- To investigate the impact, if any, of simulation training on student confidences.

Learning Outcomes

- Gain technical proficiency -psychomotor skills and learning theory
- Receive Tutor support with assistance tailored to each learner's needs
- Opportunity for learning within a professional context
- Introduction to the affective component of learning

Methods

- Quantitative
- Likert scales
- Pre/Post Test

Data analysis

Fisher Exact Test
Median Scores
$p < 0.001$

Methods

- Day one final year
- Medical students (n=129)
- Pre-test perceived confidences
- Common surgical emergencies
- Sim-Man 3G ™
- 6 scenarios in small groups
- Post-test

Data collection

CLINICAL SKILLS CONFIDENCES – PRE SIMULATION TRAINING

Please score each of the following from 1 - 5 as per Key Guide =
1 2 3 4 5

1 = Would not attempt to manage the patient.
2 = Would feel unsure but would attempt managing under direct supervision.
3 = Would feel unsure but would attempt managing unsupervised.
4 = Would feel confident to manage this presentation in routine practice.
5 = Would feel confident to manage this presentation in an emergency .

Intervention

Adult Life Threatening Events Recognition and Treatment (ALERT) ™

LOOK, LISTEN, FEEL then ACT

- **A=Airway**
- **B=Breathing**
- **C=Circulation**
- **D=Disability**
- **E=Exposure**

Data collection

1.	Managing a patient with a post operative bleed	1	2	3	4	5
2.	Managing a breathless patient	1	2	3	4	5
3.	Managing a surgical patient with reduced consciousness	1	2	3	4	5
4.	Managing a patient in acute pain	1	2	3	4	5
5.	Managing a surgical patient with reduced urine output	1	2	3	4	5
6.	Managing a critically ill conscious septic surgical patient	1	2	3	4	5

Results

Scale 1-5	Pre Simulation Training – Median/IQR	Post Simulation Training – Median /IQR
Management of a post op bleed	2 (1/2)	4* (3/4)
Management of breathlessness	2 (2/4)	3.5* (3/4)
Management of altered consciousness	2 (2/2)	3* (2/4)
Management of acute pain	2 (2/2)	4* (3/4)
Management of reduced urine output	2 (2/2)	3* (2/4)
Management of a critically ill patient	2 (1/2)	4* (3/5)

Results

- Positive effect on student confidences $p < 0.001$ in all 6 cases.
- Very positive attitudes – safe learning environment.
- Integration of previously acquired knowledge and skills.
- Improves confidences in transferring classroom taught skills to the clinical area.

Why use Simulation Based Teaching ?

- Technology savvy millennial generation students
- Promotes student engagement
- Facilitates student centred learning
- Promotion of non-traditional modes of teaching
- Embeds 21st Century modalities into the curriculum

Conclusion

SIMULATION TRAINING

- Feasible undergraduate teaching method.
- Allows for integrated skill acquisition in a safe environment.
- Aids skills transfer.
- Prepares students for postgraduate training methods.

Clinical Implications of Simulation Training

- Liaising with ERT re auditing Interns Hospital performance in Critical events.
- Addition of Simulation training to Intern Induction Programme.
- Guideline on the Role of the Intern in ERT under development – June 2018
- Survey Planned for June 2018 to elicit retrospective review of preparedness.

Data to date July 2017- Jan 2018

- Cardiac arrest calls 2012 = **75** : 2017 = **44**
- Most common ERT calls – Sepsis/Resp Distress/**Staff Support**/Unresponsive patient
- ERT calls range 20-60 pcm – highest calls **July/August**
- Increased completion and discussion of **EWS** when escalating
- Improved analysis/use of **clinical judgement** regarding scores 6 v`s 7
- Increased escalation to Clinical Nurse Manager

Acknowledgements

Clinical Skills Team

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Facilitators

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Class of 2016 and 2017