Teaching for transfer through simulation based training.

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Collaborators

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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)
UG Teaching Challenges - Curriculum

Increasing class sizes
Fottrell Report 2006

Reducing number of available experts
Reduced working hours EWTD (2003/88/EC)
UG Teaching Challenges - Curriculum

Limited availability of “Real“ patients
Costs – Simulated Patients, Venues, Staff
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.
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.
## Data collection

1. Managing a patient with a post operative bleed

2. Managing a breathless patient

3. Managing a surgical patient with reduced consciousness

4. Managing a patient in acute pain

5. Managing a surgical patient with reduced urine output

6. Managing a critically ill conscious surgical patient (sepsis)
Intervention

Adult Life Threatening Events Recognition and Treatment (ALERT)™

LOOK, LISTEN, FEEL then ACT

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

<table>
<thead>
<tr>
<th>Scale 1-5</th>
<th>Pre Simulation Training – Median/IQR</th>
<th>Post Simulation Training – Median /IQR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of a post op bleed</td>
<td>2 (1/2)</td>
<td>4* (3/4)</td>
</tr>
<tr>
<td>Management of breathlessness</td>
<td>2 (2/4)</td>
<td>3.5* (3/4)</td>
</tr>
<tr>
<td>Management of altered consciousness</td>
<td>2 (2/2)</td>
<td>3* (2/4)</td>
</tr>
<tr>
<td>Management of acute pain</td>
<td>2 (2/2)</td>
<td>4* (3/4)</td>
</tr>
<tr>
<td>Management of reduced urine output</td>
<td>2 (2/2)</td>
<td>3* (2/4)</td>
</tr>
<tr>
<td>Management of a critically ill patient</td>
<td>2 (1/2)</td>
<td>4* (3/5)</td>
</tr>
</tbody>
</table>
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.
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.
Current Projects

- Surveying Interns in post
  - Most common surgical presentations
  - Perceived levels of competence in managing
  - Escalation practices

- Monitoring of Calls to Emergency Response Team

Future

- Survey Senior Surgical staff on Interns levels of ability
- Survey Nursing Staff on Interns abilities