Surgical Skills with Shaky Hands

Assessing Foundation Doctors' Confidence in Surgical Skills

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Introduction

When foundation year (FY) doctors begin their training, they are exposed to specialities which are briefly covered at university. This lack of specific training produces gaps in knowledge, which makes FYs feel overwhelmed and under-confident. This compromises patient safety and also hinders further development of key skills (1). This is most prevalent in those undertaking surgical rotations - teaching of specific surgical skills such as suturing are scarcely covered in the current medical school and FY curriculums.

Studies have shown that the current training of FY doctors is nonspecific and insufficient for their surgical rotations (1). Efforts to tackle this issue include increasing optional extracurricular courses and activities at both medical school and FY levels. However, these programs can often be costly or difficult to access due to variations in health board funding based on location (2). Research has shown that practical and simulation-based training significantly enhances doctors' confidence and improves patient safety (3). This project brings attention to this widespread issue and will help to identify and understand the current issues with teaching and what can be done.

Aim

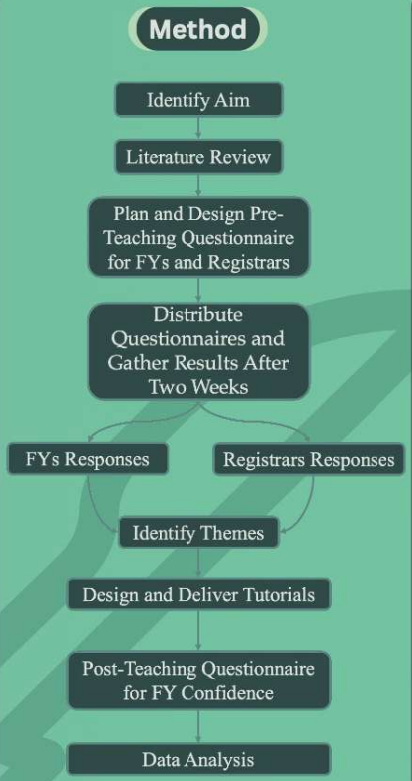
Identify further teaching opportunities in surgical FY placements.

Demonstrate improved confidence in surgical and post-operative care.

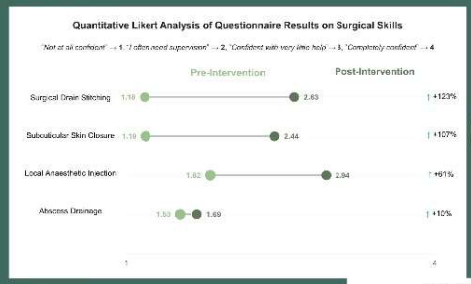
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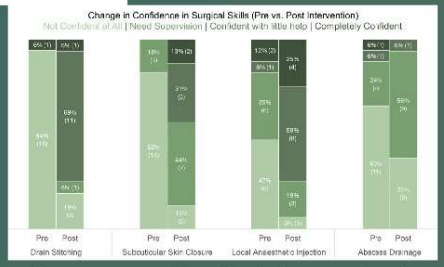
Method



Results & Statistical Analysis







Included procedures were selected based on responses from both the FY and registrar questionnaires, then filtered based on which teaching sessions would be the most possible to deliver in the limited time frame.

For all surgical procedures taught to the FYs there was an average increase in confidence level.

The most notable increase was in stitching surgical drains, the teaching for which was attended by 24% respondents.

"Abscess drainage" with least improvement in confidence overall, was covered in a session attended by 21% of post-teaching respondents.

100% of respondents said they would recommend integrating this teaching (or something similar) into standard medical education for future foundation doctors.

Qualitative Analysis

More experience with surgery was associated with increased interest in the specialty. FY doctors enjoyed the 'varied nature of the job' and working conditions. However, even with past experience in surgical placements 35.5% of respondents indicated no interest in surgery, citing negative experiences of seniors.

Respondents described current teaching as 'useful', 'relevant to what we need' and '[they] enjoy small group tutorials'. However, 35% of FYs reported receiving "no teaching at all", or no specific departmental teaching. 64.7% of respondents asked for more teaching, practical sessions and specialty-specific teaching.

Pre-intervention, 41% of FYs used "overwhelmed", "stressful, or ""stressed" when describing their emotions while facing emergency situations. Prior experience with emergency scenarios was linked to improved confidence.

Post intervention, 75% FYs were inclined to a career in surgery, with 100% expressing satisfaction with teaching. Respondents appreciated their "hands on experience", which increased confidence, as well as small group teaching of targeted topics "useful" to their specialty and helping them "integrate other knowledge".

Strengths

- Registrar questionnaires provided stronger evidence as to which procedures FY doctors required training on.
- The focus on general surgery FY doctors allowed more specific interventions to be identified, allowing for more tailored practical training.
- Usage of mixed methods (quantitative and qualitative data from questionnaires) to identify the most useful procedures to provide training on.

Weaknesses

- Low Sample Size - 17 FY & 9 registrar respondents to pre-teaching questionnaire,16 FY post-teaching questionnaire respondents.
- Respondents were all in general surgery (including the subspecialties). This means the results may not be generalisable.
- Potential misreporting and recall bias can occur when doctors fill in all the questionnaires, which might have skewed our results.

Discussion

Our project addresses the critical gap in foundation year teaching (4). Surveys highlighted a strong demand for hands-on training in suturing, NG tube insertion, and post-op complication management. While registrars recognized these gaps, some underestimated FYs' eagerness for structured teaching. Following response collection, targeted sessions were implemented , leading to marked increases in confidence and competence. Our findings reinforce the need for integrated specialty-specific training to better prepare junior doctors for surgical placements, and consequently improve patient outcomes.

Implications:

Through creating our project we've already inspired a once weekly teaching session to all FYs that are rotating through colorectal surgery, instead of just a one-off session. This engagement from FYs show that they are willing to improve the skills they are unconfident with – if teaching is offered by seniors. Thus, it is probable that if teaching is offered by seniors in other departments or even at a trust wide scale, levels of engagement by FYs will be at the same level as seen in our results.

Notable Findings & Considerations

The project has generated dialogue between the university, foundation year doctors and teaching staff. By identifying an educational gap, we aim to promote future engagement from educators to enhance the confidence of foundation year doctors. This gap in teaching could have a lasting impact on future students and FY1s especially regarding their confidence and preference towards specialising in surgery.

The identification of this educational gap may also influence the wider teaching of surgical placements. There was a strong consensus across the board requesting further teaching and it would be interesting to explore whether this could be the case for other surgical specialities outside of colorectal.

Based on these findings, we hope that this research can be expanded beyond our target cohort to uncover further gaps in medical education of foundation year doctors.

Conclusion

- Participants reported increased confidence in all 4 taught procedures
- Post-intervention questionnaire reported unanimous improvement in surgical knowledge
- Unanimous agreement among all participants to integrate similar teaching into future FY education
- Project has inspired development of a formal teaching programme to be delivered weekly by the surgical department in the hospital