

The Impact of Targeted Informal Information Days on Early-Career Doctor's Interest in Surgery

B.V. Bolarinwa, E. McCormack, Z. Penny, D. Lennon, M.P. Foley.

Irish Surgical Training Group (ISTG), Royal College of Surgeons Ireland, St Stephen's Green,
Dublin 2, Ireland.

Abstract

Aim

To investigate how much impact targeted informal information days have on early-career doctors and the impact of these information days on their perception of surgical careers.

Methods

All attendees of the 2024 Irish Surgical Training Group (ISTG) Careers' Day and Aspiring Surgeons Research Symposium were given a link to an online survey following the event. Their responses were aggregated and analysed using Microsoft Excel.

Results

57% (n=47/82) of attendees submitted feedback forms. All respondents were considering a career in surgery prior to the event. After the event, 93.5% (n=44) attendees rated themselves more likely or much more likely to pursue a career in surgery, while none reported a new negative view on surgery. Additionally, prior to the event, 47% of attendees (n=22) were considering applying to Core Surgical Training, while a further 13% (n=6) were unsure. After the event, 76.5% (n=36) reported themselves to be more likely or much more likely to apply for CST at some point, and only 2 (4.3%) considered themselves somewhat less likely to apply.

Discussion

Our study has identified the positive influence that informal sessions can have in promoting interest in surgical specialities as well as providing networking opportunities amongst consultants and NCHDs that otherwise may not have been easily accessible.

Introduction

As the Irish population ages, recruiting sufficient numbers of qualified surgeons into the healthcare system is paramount ^{1,2}. Workforce projections by the National Doctors Training & Planning (NDTP) suggest that the number of consultant surgeons needs to increase from 13.2

per 100,000 population in 2023 to 19.59 per 100,000 population by 2038 ². Ensuring a consistent influx of new medical graduates into formalised surgical training programmes is essential to meeting these recruitment targets.

There are many factors which can influence an individual's career aspirations, ranging from individual preferences and income prospectives to the perceived quality of life associated with the speciality ³⁻⁶. However, multiple studies have determined that exposure, whether direct or indirect, to a chosen speciality is of utmost importance ⁷⁻¹⁰.

In Ireland, exposure to surgery begins in the clinical years of medical school during which medical students rotate through defined specialties as determined by their university curriculum. Upon medical school graduation, newly-qualified doctors complete a structured intern year consisting of four three-month rotations through two surgical and two medical specialties. Following this generalist intern year, Irish doctors must choose which specialty to apply to for post-graduate training.

There is also the option for an 'Academic Track Internship' available to newly-qualified doctors during their mandatory internship. The Academic Intern Track provides the opportunity to some interns to undertake research during one of their three-month rotations. This research may be related to healthcare leadership and management, medical education or clinical research. This provides excellent exposure to structures research opportunities but may inadvertently limit exposure to hands-on surgical training, especially if the research is to be conducted during one of their designated surgical rotations.

Medical students and early-career doctors have previously stated that information from surgical consultants and non-consultant hospital doctors (NCHDs) about their specialty allows for informed decision-making when considering a surgical specialty ¹¹. The Irish Surgical Training Group (ISTG), the voluntary representative body for Irish surgical NCHDs, host an annual "Careers Day" open to medical students and junior doctors. The event is promoted mainly online via official ISTG social media channels including 'Instagram' and 'X'. Intern representatives and communication officers of surgical and medical societies across the six medical schools in Ireland are also contacted in order to distribute information regarding the event to their members and fellow intern colleagues.

After a series of introductory talks from consultant trainers affiliated with the Royal College of Surgeons in Ireland (RCSI) Core Surgical Training scheme for each speciality, attendees can have informal discussions with the consultants and specialist registrars to gain better insight into the daily activities, patient populations, and challenges.

Attendees were invited to answer a survey on the influence of the event on their perception of surgical careers. The aim of this study was to assess the importance of targeted informal information days on the recruitment of future surgical trainees in Ireland.

Methods

An online survey was distributed to all attendants of the 2024 Irish Surgical Training Group (ISTG) Careers' Day and Aspiring Surgeons Research Symposium. The survey questions were constructed using a combination of multiple-choice answers and free-text answers.

The survey included demographic data regarding what stage of their medical career the attendants were ranging from 'Medical Student' to 'Consultant' as well as their level of interest in a career in surgery before attending the event. This was assessed using five-point Likert scales in which 1 was 'not interested', 3 was 'neutral' and 5 was 'extremely interested'. The survey also assessed the attendees interest in applying to the Core Surgical Training (CST) Programme before and after the event with further questions investigating attendees interests in specific surgical specialties before and after the event and specialty talks. Lastly, attendees were given a free-text option to detail what aspect of the event they found the most engaging and what aspects they wanted to see improved.

The survey was distributed using the online survey tool Google Forms (California, United States) and results analysed using Microsoft Excel (Washington, United States).

Results

Feedback forms were received from 57% of attendees (n=47/82). Respondents included 22 interns (47%), 17 medical students (37%) and eight SHOs (17%). As determined by survey responses, all attendees were considering a career in surgery prior to the event. After the event, 93.5% (n=44) of attendees rated themselves more likely or much more likely to pursue a career in surgery, while none reported a new negative view on surgery.

Prior to the event, 47% of attendees (n=22) were considering applying to Core Surgical Training, while a further 13% (n=6) were unsure. After the event, 76.5% (n=36) reported themselves to be more likely or much more likely to apply for CST at some point – and only two (4.3%) considered themselves somewhat less likely to apply.

Attending the event and listening to Training Programme Directors deliver talks on each of their specialities expanded interest in various specialities (Figure 1).

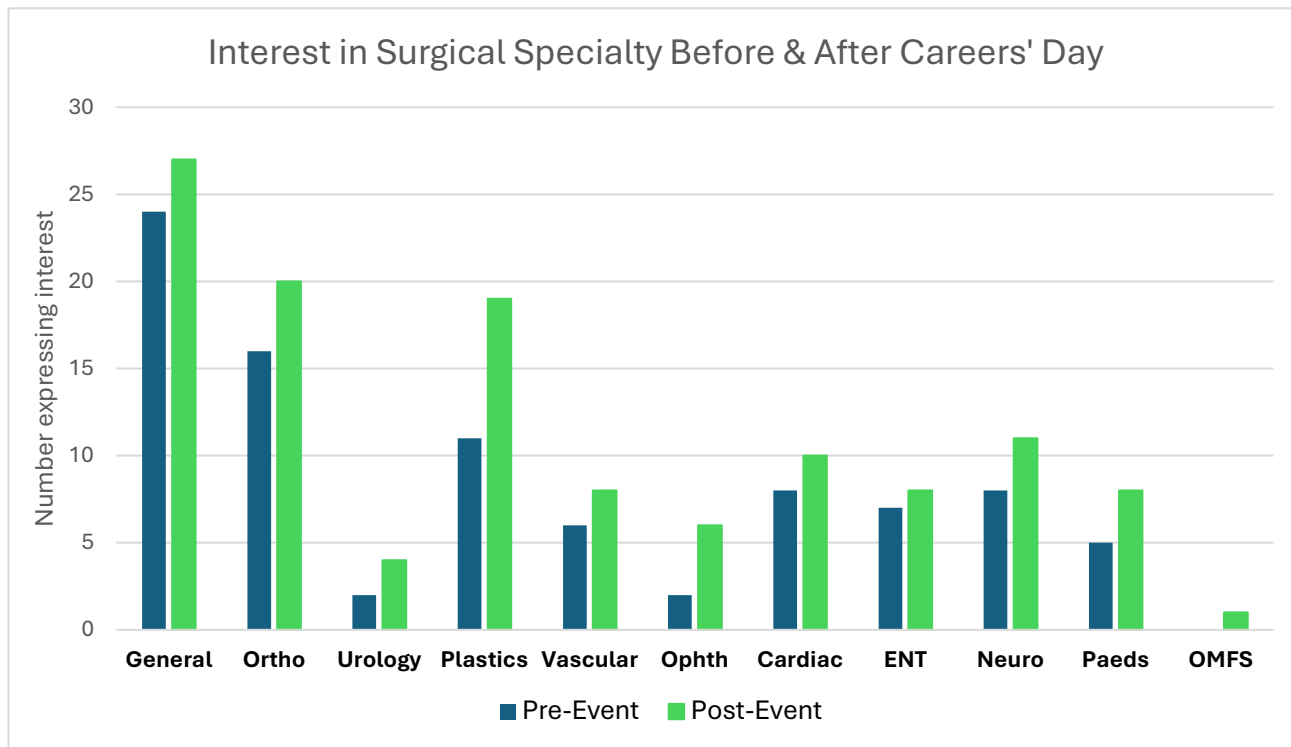


Figure 1. Graph demonstrating the change in reported interest in each surgical specialty before and after hearing introductory talks by CST Lead Consultants

Regarding the academic aspect of the event, 47% (n=22) of attendees reported the research session improved their understanding of surgical research and 87% (n=41) reported they felt more likely and confident about submitting research to future conferences.

In a thematic analysis of free-text responses on what aspects of the event attendees found most engaging and helpful, 55% (n=26) reported the specialty talks, 36% (n=17) the chance to network with consultants and near-peers in a relaxed setting and 8.5% (n=4) enjoyed the exposure to clinical research in a supportive environment. When asked what they wanted to see more of, 30% (n=14) wanted more time for networking, 4% (n=2) wanted an increased focus on quality of life and work-life balance in the specialty talks and 8.5% (n=4) wanted more time dedicated to simulation of surgical skills. Encouragingly, 94% (n=44) of attendees reported they were likely or very likely to recommend the event to a peer interested in a surgical career.

Discussion

Our results emphasize the importance of exposure to surgical specialities in attracting students and early-career doctors to the field ^{3,6,10}. The majority of existing research has focused on exposure to surgical practice within the hospital, which can be an intimidating setting for students and demanding for clinicians. Surgeons without protected teaching time may have to prioritise patient care over facilitating students, which can negatively impact their experience of specialty ^{12–14}. As such, informal “Careers Events” present a valuable opportunity for students and early-career doctors to interact with surgical consultants and senior trainees in a more relaxed environment ⁶. Experienced surgeons speaking on their training pathways and daily activities aids in correcting perceptions and combating preconceived biases on surgical lifestyles and the depth of various specialty’s practice ^{15,16}. This is evident in a study conducted by Retrouvey et al. in which medical students were invited to an interactive career night information session to address prior preconceptions of plastic surgery as a surgical subspeciality as well as educate medical students on the specialty, increase their interest in the field as well as provide a valuable networking opportunity. This event, similar to our study, consisted of presentations given by experienced plastic surgeons followed by a dedicated networking event. Following the event, not only did student’s interest in surgery increase but also did their interest in completing a plastic surgery residency. Additionally, there was a significant increase in the medical students’ understanding of a plastic surgeon’s scope of practice from simply cosmetic to an understanding of a plastic surgeon’s role in breast reconstruction, paediatrics, microsurgery, burns, hand, and craniofacial surgery ¹⁵.

Furthermore, such ‘careers fair’ events allow students and early-career doctors gain insight into specialties that they might not have rotated through in university or during intern year ¹⁶. This was particularly reflected by the increased interest reported by majority of our attendees across all sub-specialities following the introductory talk by each CST Lead consultant. Similar results were reported by Vessy et al who surveyed a cohort of medical students from University College Cork before and after attending a surgical careers information evening ¹⁶. Vessy et al aimed to establish what impact a surgical conference oriented to medical students had on their knowledge of surgical specialties and surgical training pathways. Similarly, following their event, there was a positive and significant impact of the conference on the medical students’ knowledge on these topics ¹⁶.

Overall, our results indicate that interest in surgical careers was strengthened after attending the ISTG Careers Day & Aspiring Surgeons’ Research Symposium, with 76% (n=36) of responders reporting they were more likely to apply to the Core Surgical Training programme. Participation in such events by both consultants and NCHDs at various stages along the training pathway should be encouraged and facilitated particularly due to the overall positive

impact they have at relatively low costs and resource usage compared to other methods for gaining surgical interest such as virtual reality simulators, simulation courses, and dedicated specialty workshops^{17–19}. Although these methods have also shown a positive and reliable impact in both surgical training and engagement, these methods are also known to be more resource dependent with cost often being a barrier to the implementation of these strategies²⁰. Therefore, low-cost events organised by surgical societies and training groups serve as a unique opportunity for targeting early-career doctors and increasing surgical interest and engagement.

The main limitations of this study are the small sample size and associated responder bias. Over 480 candidates applied to core surgical training in 2024, aiming for the July 2025 national intake²¹. Attendance rates at our event represents approximately 17% of all applicants, with the majority of attendants working or studying in Dublin. However, the strong response rate of 57% illustrates the interest early-career surgeons in attendance have on this topic. Furthermore, the survey did not explore perceived barriers to a surgical career within this cohort, which may identified areas to focus on for further events. Another area of focus for future events would be to target more medical students and early-career doctors from outside the Dublin region in order to gain a wider and more accurate population representation of our target audience. This may be achieved by organising regional events in the six Irish medical schools in order to target those who may not have the facilities, costs, and means to attend central events. Similarly, having an online, virtual element to our ‘Careers Day’ event is another means of achieving this goal.

In conclusion, it is important to identify both medical students and early-career doctors who may have an interest in surgery. These individuals must be continuously encouraged to pursue the speciality in order to bridge the proposed identified gap in the workforce. This can be achieved formally through medical school and postgraduate curriculums. However, our study has identified the positive influence that informal sessions can have in promoting interest in surgical specialities as well as providing networking opportunities amongst consultants and NCHDs that otherwise may not have been easily accessible.

Declarations of Conflicts of Interest:

None declared.

Corresponding author:

Bukola Veronica Bolarinwa,
Irish Surgical Training Group (ISTG),
Royal College of Surgeons Ireland,
St Stephen’s Green,

Dublin 2,
Ireland.

E-Mail: bukolaveronicab24@rcsi.com

References:

1. Central Statistics Office. Population and Labour Force Projections 2023-2057: Population Projections Results. <https://www.cso.ie/en/releasesandpublications/ep/p-plfp/populationandlabourforceprojections2023-2057/populationprojectionsresults/>. 2024.
2. HSE National Doctors Training & Planning. Surgery Medical Workforce in Ireland 2024-2038: An expert stakeholder informed review. 2024.
3. Azizzadeh A, Mccollum CH, Miller Iii CC, Holliday KM, Shilstone HC, Lucci A. Factors Influencing Career Choice Among Medical Students Interested in Surgery. *Curr Surg*. 2003;60(2):210–3.
4. Marshall DC, Saliccioli JD, Walton SJ, Pitkin J, Shalhoub J, Malietzis G. Medical Student Experience in Surgery Influences Their Career Choices: A Systematic Review of the Literature. *J Surg Educ*. 2015 May 1;72(3):438–45.
5. Peel JK, Schlachta CM, Alkhamesi NA. A systematic review of the factors affecting choice of surgery as a career. *Canadian Journal of Surgery*. 2018 Feb 1;61(1):58–67.
6. Murphy VL, Chao P, Koea J, Srinivasa S. Systematic review of the efficacy and purpose of student surgical interest groups. Vol. 93, *ANZ Journal of Surgery*. John Wiley and Sons Inc; 2023. p. 2580–8.
7. Ruparell K, Barve R, Tas RN, Chen S, McLaughlin R, Ravendren A, et al. Motivators and deterrents for early career female doctors applying to surgical training programmes in the UK National Health Service: A mixed-methods study. *BMJ Open*. 2022 Dec 1;12(12):1–11.
8. Kirkham JC, Widmann WD, Leddy D, Goldstein MJ, Samstein B, El-Tamer M, et al. Medical Student Entry into General Surgery Increases with Early Exposure to Surgery and to Surgeons. *Curr Surg*. 2006 Nov;63(6):397–400.
9. Sutton PA, Mason J, Vimalachandran D, McNally S. Attitudes, motivators, and barriers to a career in surgery: A national study of uk undergraduate medical students. *J Surg Educ*. 2014;71(5):662–7.
10. O'Herrin JK, Lewis BJ, Rikkers LF, Chen H. Medical student operative experience correlates with a match to a categorical surgical program. *Am J Surg*. 2003;186(2):125–8.

11. Corless KG, Samy A, Kamil A, Ryan EJ, Shafik L, Bassily K, et al. The future of general surgery in Ireland: factors influencing career decisions of medical students. *Ir J Med Sci* [Internet]. 2021;190:741–7. Available from: <https://doi.org/10.1007/s11845-020-02347-8>
12. Ravi K, Anyamele UA, Korch M, Badwi N, Daoud HA, Shah SSNH. Undergraduate Surgical Education: a Global Perspective. *Indian Journal of Surgery*. 2022 Apr 1;84:153–61.
13. DaRosa DA, Skeff K, Friedland JA, Coburn M, Cox S, Pollart S, et al. Barriers to effective teaching. *Academic Medicine*. 2011;86(4):453–9.
14. Rowe DG, Dalton JC, Ladowski JM, Soto AL, Rhodin KE, Migaly J, et al. Prior Teaching Experience and Barriers to Effective Resident Teaching: A Cross-Sectional Study. *Journal of Surgical Research*. 2024 Sep 1;301:371–7.
15. Retrouvey H, Zuo KJ, Ho ES, Forrest CR. The impact of a career night information session on medical students' perceptions of the scope of practice of plastic surgeons. *Journal of Plastic, Reconstructive and Aesthetic Surgery*. 2018 Jun 1;71(6):945–6.
16. Vesey M, BCh BAO M, Dablouk L, Kearney L, Clover J. The Impact of a Student Led Surgical Conference on Student Knowledge and Interest in Surgical Training. *International Journal of Surgical Education (IJSIED)* [Internet]. 2024; Available from: <https://doi.org/10.5281/zenodo.14837679>
17. George J, Combella T, Lopez-Marco A, Aslam U, Ahmed Y, Nanjaiah P, et al. Winning Hearts and Minds: Inspiring Medical Students into Cardiothoracic Surgery Through Highly Interactive Workshops. *J Surg Educ*. 2017 Mar 1;74(2):372–6.
18. Tesche LJ, Feins RH, Dedmon MM, Newton KN, Egan TM, Haithcock BE, et al. Simulation experience enhances medical students' interest in cardiothoracic surgery. *Annals of Thoracic Surgery*. 2010 Dec;90(6):1967–74.
19. Bartlett J, Kazzazi F, To K, Lawrence J, Khanduja V. Virtual Reality Simulator Use Stimulates Medical Students' Interest in Orthopaedic Surgery. *Arthrosc Sports Med Rehabil*. 2021 Oct 1;3(5):e1343–8.
20. Hosny SG, Johnston MJ, Pucher PH, Erridge S, Darzi A. Barriers to the implementation and uptake of simulation-based training programs in general surgery: a multinational qualitative study. *Journal of Surgical Research*. 2017 Dec 1;220:419–26.
21. RCSI Surgical Affairs. Core Surgical Training Intake Report 2020-2025. Dublin; 2025 Jun.