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RCS Senior Clinical Fellowship Survey: motivations, outcomes and cost of senior surgical fellowships

Completing a surgical fellowship increases specialist skills and raises the chances of securing a consultant post, but at what cost?

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The Greenaway review of medical education, published in 2013, led to major changes to the delivery of postgraduate training in the UK.¹ This review was pertinent, owing to the changing demographics of society, with growing numbers of people with multiple comorbidities, an ageing population, health inequalities and increasing patient expectations. The broader-based and shorter training pathways recommended in the review, coupled with the impact of the European Working Time Directive,² and more recently the new junior doctors' contract, have led to concerns for the future of surgical training.³

Surgical fellowships are dedicated periods of training usually undertaken towards the end of specialist training, often at units of excellence, in particular subspecialties or techniques (eg robotics), and

usually outside the trainee's postgraduate deanery. Fellowships are valued by trainees

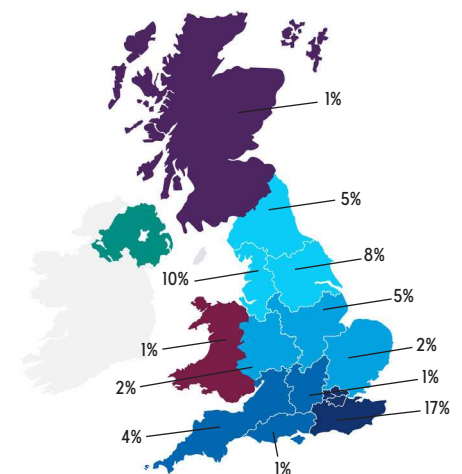


Figure 1 Responses by deanery of training; responses received from 60% of trainees; 2% were from non-UK training programmes (non-compulsory question)

and enable them to attain high-level skills, to further their training and to make them competitive in the job market.⁴ The fellowships may be within the UK, but also commonly Australasia, Canada and the United States. The US and Canadian fellowship programmes are well established, with accreditation by the Accreditation Council for Graduate Medical Education and the Royal College of Physicians and Surgeons of Canada, respectively. In the UK, with the exception of a minority of nationally supported programmes (eg national laparoscopic colorectal fellowships) and the centrally funded Training Interface Group fellowships (eg oncoplastics, head and neck and hand surgery), there have been concerns regarding the mixed quality of UK fellowships and the potential negative impacts on local trainees.⁴ This led to the development of The Royal College of Surgeons of England (RCS) fellowship scheme with the aim of formally accrediting schemes to improve quality and transparency.⁵

The field of surgical oncology, in particular, is rapidly changing, with emerging targeted therapies and novel technologies presenting new challenges and opportunities. The global cancer burden is set to rise over the next few decades and high-quality subspecialty fellowships will help to address this need.⁶

A national survey of surgical trainees from all specialties and grades conducted by the Association of Surgeons in Training found that over three-quarters of trainees intend to take a fellowship during their training. The most frequently stated reasons included increasing their confidence, competence and attaining specialist skills.⁴ However, concerns have been raised regarding the burden of postgraduate surgical training costs, let alone the additional costs of undertaking a fellowship.^{3,7}

To date, there has been no national survey exploring the educational value and costs of completing a senior surgical fellowship. This study was undertaken by the British Association of Surgical Oncologists on behalf of

the RCS Senior Clinical Fellowship Scheme Group to ascertain from senior trainees and newly appointed consultants who have undertaken senior fellowships, their reasons for undertaking them, the costs incurred, rewards and problems encountered.

MATERIALS AND METHODS

Survey design

An online questionnaire was developed by the authors with reference to published guidelines,⁸ reviewed by members of the RCS fellowship committee and then piloted on six fellows to confirm face and content validity prior to dissemination. The questionnaire comprised four main domains: basic demographics, motivations for undertaking the fellowship, costs incurred and outcomes (Appendix 1).

Participants and administration of questionnaire

The free online platform Survey Gismo (www.surveygismo.com) was used to administer the questionnaire. All RCS senior clinical fellowship recipients between 2012 and 2017 were contacted directly via email with a link to the online survey. Follow up emails were sent to non-respondents. Supervisors of UK fellowships who are not currently included in the RCS SC fellowship scheme, but who are known to the RCS, were emailed with a request to pass on the link to their current and previous fellows from 2012 to 2017. A small number of Training Interface Group fellows and trainees who had completed international fellowships were also asked to complete the survey if they were known to the fellowship committee members.

RESULTS

Complete responses were received from 85 fellows regarding 97 fellowships in total; 58 of 153 RCS senior clinical fellows (38% response rate) and 27 non-RCS senior clinical fellows of 100 contacted via supervisors and personal contact (27% response rate). The overall response rate

Figure 2 Timing of fellowship in relation to Fellow of The Royal College of England (FRCS) examinations and certificate of completion of training (CCT)

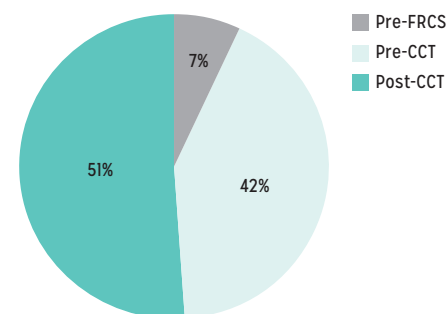
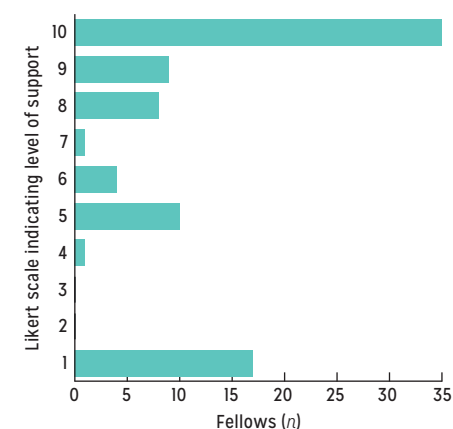


Figure 3 Likert scale responses regarding level of support from their training programme director and postgraduate training deanery in undertaking their fellowship (1 = no support, 10 = highly supported)



was 34% (85/253). The 27 non-RCS fellows included certified fellowship programmes in Australia (3), Canada (2) and Europe (1), plus four Training Interface Group fellows, three specialty association fellowships, two national laparoscopic colorectal fellowships, two industry sponsored fellowships and one Ministry of Defence. Eight fellows completed two fellowships and two completed three fellowships, of whom eight fellows spent time both in the UK and Europe or Canada. Only 12 fellowships were locally arranged or trust positions without any kind of certification.

Demographics

The majority of fellows were from UK training schemes with the greatest

Figure 4 Fellowship specialty (respondents could select as many specialties as they wished that were relevant to their fellowship)

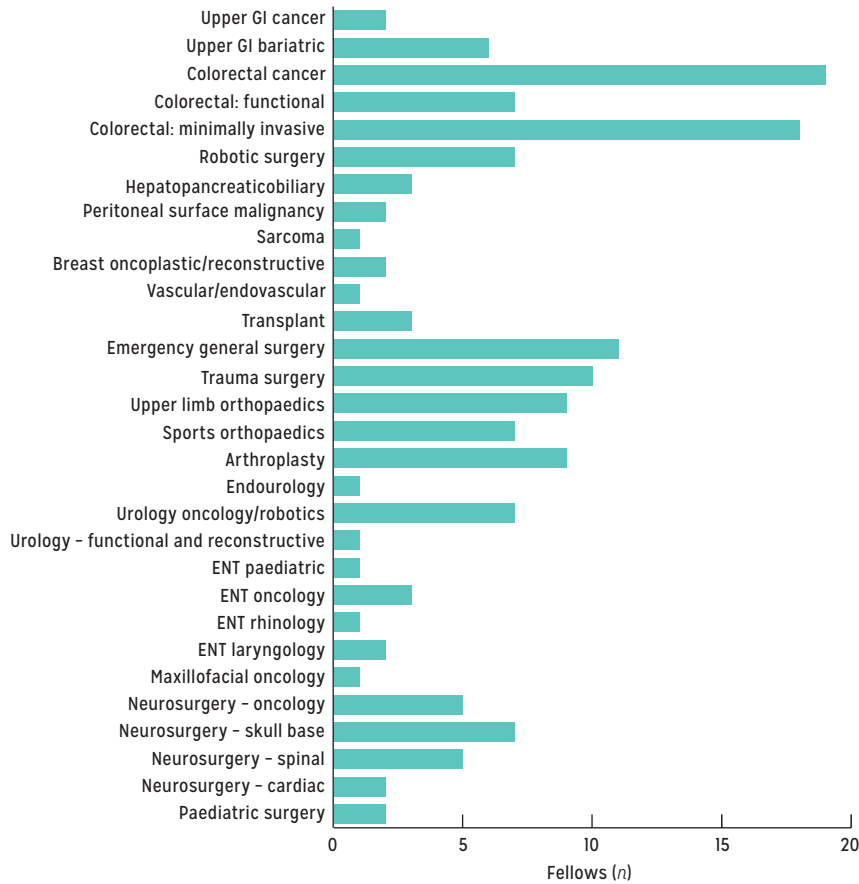


Figure 5 Reasons for undertaking the fellowship(s)



proportions from London, the North West and Yorkshire and the Humber deaneries (Figure 1). Fellowships were predominantly in the UK (84%; 81/97); however, half of those who went abroad also completed fellowships in the UK. When asked

their reasons for remaining in the UK for their fellowship, 58% (47/81) stated that it was due to family commitments and/or cost. The majority also stated that they chose the UK because of the training opportunities available. Over 50%

of respondents applied for advertised fellowships (49/85), but many also had personal contacts (48/85), contacted units directly (19/85) or were recommended the fellowship by their trainers (20/85).

Career timing and reasons for fellowship

Most fellowships were undertaken after completion of fellowship examinations (FRCS; 79/85), with slightly more after receiving their certificate of completion of training (CCT; 43/85) than before CCT (36/85; Figure 2). Only 7% (6/85) were undertaken before taking the FRCS. The majority of fellows felt well supported by their deanery and training programme directors in undertaking a fellowship; however, 20% (17/85) reported that they experienced problems getting approval from their training programme director for time out of training (Figure 3). Fellowships were undertaken in a variety of specialties, with the greatest number in colorectal, orthopaedics and emergency general surgery (Figure 4).

There were various reasons for undertaking a fellowship selected (Figure 5), with the most frequent being the desire to undertake additional training in a special area of practice 86% (73/85). Many fellows also stated that they undertook their fellowship(s) to become a better surgeon (64/85), to gain more confidence in skills to progress to consultant practice (64/85), because their area of surgery is so specialised (41/85) and to make them more competitive at consultant interviews (40/85). Over one-third of fellows felt that it is expected in their field of surgery and one-quarter said that they undertook their fellowship due to difficulties in getting training in a normal training post. Many fellows have been successful in being appointed to substantive consultant posts following their fellowship (43/85).

Cost to the trainee

Fellowships varied in total duration from 3 to 27 months (median 12 months; Figure 6).

Over half of fellows (44/85) stated that their salary stayed roughly the same while on fellowship; only 7/85 reported an increase in their salary; 34/85 reported a fall in their salary, with a median estimated monthly deficit for those fellows of £1,500 (range £500 to £2,300). Nineteen of 34 fellows who reported a fall in their salary did not participate in the on-call rota, but only half of these fellows reported that they took on additional locum work to make up the difference.

Of all trainees who undertook fellowships, 14/85 stated that they incurred no additional costs as their fellowship was either at their base hospital or close to home. For the remainder who did incur additional non-remunerated costs ($n=71$), the most frequent cause was travel (61/71), followed by accommodation costs (49/71), relocation costs for the fellow (32/71), relocation costs for their family (19/71) and additional childcare costs (13/71; Figure 7). The median non-remunerated cost per month was £750 (range £27–£4,167, mean £971), with longer fellowships showing a trend towards higher costs (Figure 8). Fellowships carried out abroad were associated with higher monthly non-remunerated costs (median £1,300, range £500 to £2,916).

Value of fellowships

All respondents thought that their fellowship was worthwhile (Likert rating ≥ 7) and that they would recommend it to a colleague. All but one fellow thought that their fellowship was well supervised and 94% considered that the fellowship had changed their practice. The vast majority (93%; 79/85) also stated that they had achieved all of their set goals and over half felt that the fellowship had helped them to secure a consultant post. Of the 54 fellows who have secured a substantive or locum consultant post following their fellowship, over half are in university teaching hospitals, one-quarter in teaching hospitals and one-quarter in district general hospitals. Fourteen per cent stated

that they had problems with local trainees, with free-text comments from a small number of respondents indicating that this was related to the need to fairly divide complex cases. When asked regarding their main achievements while on fellowship, there were many free-text comments about the excellent quality of the trainers and mentors, opportunity to perform a high number of cases in a subspecialist interest and value to their long-term career (Box 1). When asked for any other feedback regarding their fellowship, many fellows stated that it was the best training that they had ever experienced and that it enabled them to progress in their skills and confidence in preparation for consultant practice (Box 2).

DISCUSSION

The desire to undertake fellowships highlights the fact that standard surgical training may not provide all of the skills required to move into a consultant role in specific disciplines. The high costs incurred are predominantly associated with travel and relocation. As fellowships are increasingly required as part of UK surgical training, the question arises as to whether there should be more support from the colleges and the NHS to support surgeons. The skills acquired by these surgeons are beneficial to the NHS and the costs of acquiring this training should not be borne by the trainees. These additional costs could be covered by bursaries or more generous expenses packages and relocation allowances, although this may be difficult to administer, as the trainees are often post-CCT and therefore effectively unemployed and thus in effect taking up stand-alone posts. One option would be for postgraduate training deaneries to take responsibility for the senior fellowships offered within their region and to allow provision to be made for quality control. The need to travel at this senior stage in training may also discourage surgeons who are parents, in particular female surgeons, to undertake fellowships when children

Figure 6 Total length of fellowship(s) in months

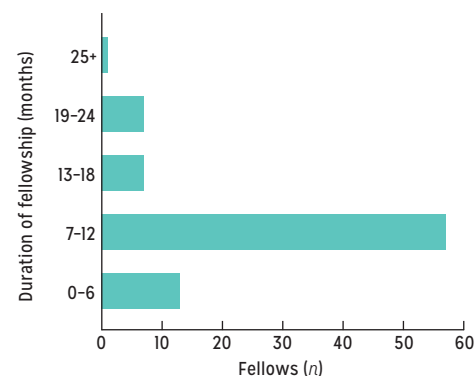


Figure 7 Reasons for additional non-remunerated costs

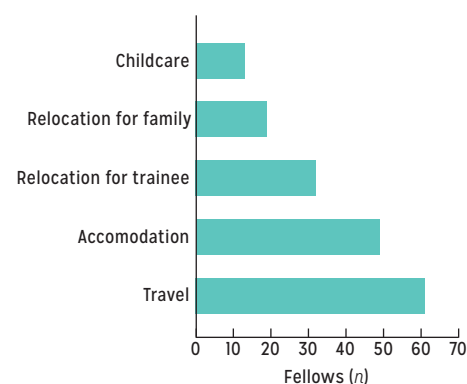
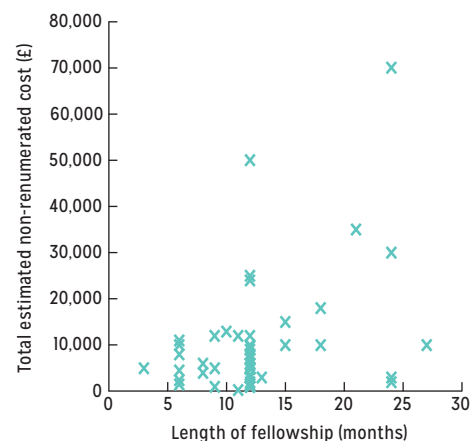


Figure 8 Total estimated non-remunerated cost of the fellowship(s) plotted against total length of fellowship



are established in school and additional childcare costs may be incurred.

The overall response rate of 34% is acceptable for a health professional survey. This response rate is partly attributed to

Box 1 Free text comments regarding achievements while on fellowship

- Incredible confidence due to hands on approach. Higher order thinking to function as a consultant.
- Learned to operate, made up for severe deficiencies in microvascular and reconstructive training from my higher surgical training.
- Operated every day, high volume experience of working at consultant level, decision-making experience of another healthcare model.
- Operative experience: high volume caseload and case mix with some new surgical techniques learnt. Experience outside my training region. Network of colleagues for advice/opinion.
- Good surgical experience, good mentorship, good research.
- Advanced surgical skills. Perioperative management of complex obesity. Developing independent practice.
- Greater confidence in decision making, increased operative skills in complex cancer, professional skill development in becoming a consultant.
- Excellent clinical experience. Completion of BOA leadership program. Involvement in a quality improvement project.
- Independence and confidence in all laparoscopic resections including laparoscopic TME. Enhanced clinical confidence. Exposure to complex and recurrent cancer work.
- Consultant level efficiency in organising patient's care from first contact, first OPA, to surgery and post-op management. Performing very challenging cases as first operator (supervised and supported). Improving communication skills and better understanding multidisciplinary approach.
- Very good exposure to all spinal cases. Massive increase in confidence in dealing with complex spinal cases. Improvement of knowledge base. Understanding of various ways to manage patients with similar condition. Networking.
- Hands on experience. Expertise in specialist area. Set up service/development of skull base service.

Box 2 Further free text comments regarding fellowship

- Best move I ever made. The fellowship is exemplary. A credit to British surgery!
- The biggest problem is the clash with the local NTN's, there should be a system to ensure difficulty of the cases be distributed between the trainees and fellows.
- Excellent operative experience. Very demanding on call commitment.
- Great fellowship, developed my skills, after that I got a locum job and recently a substantive job.
- Loved every minute and gave me the confidence to be a better consultant. I am now the cancer lead for the entire cancer network too.
- My fellowship experience was invaluable. It provided just the right amount of supervision needed at the post CCT stage. It covered both trauma and elective surgery.
- Any fellowship is what you make of it. Choose the fellowship well, ie find out if they provide the experience you want in the specialized area you are interested in.
- Best year of training. Has improved my skills and confidence to function as a consultant colorectal surgeon.
- It was a very useful experience. I am grateful to my fellowship lead for the training I had and I highly recommend it.
- An amazing training opportunity. Can't imagine a better set up and support than in this fellowship.
- Post CCT fellowship is a must and worthwhile experience.
- Most valuable training experience of my life.
- This was an outstanding fellowship, extremely well run with an opportunity to gain both clinical skills and managerial skills that have helped me massively in my current consultant practice. It is a very friendly and supportive unit with ample opportunities for both specialist work and more general trauma exposure, which is a huge plus.
- A fellowship abroad provides an unparalleled opportunity to develop not only as a technical surgeon but also as an independent practitioner. The chance to experience alternative ways of working and exposure to alternative healthcare systems allows for an approach to a personal practice that is incredibly beneficial on return to the UK.

non-functional email addresses for fellows who have finished training and moved into either consultant or further fellowship posts. Fellows on locally arranged programmes outside the central college system were very difficult to contact as no database exists for

these and the postgraduate deaneries do not store contact details once a trainee has completed training and exited the programme. Changes to data protection law in the UK also prevented access to databases of trainees not held for this purpose.

CONCLUSION

This survey shows that fellowships are of excellent quality and aid in the development of technical, non-technical and subspecialist skills required for obtaining NHS consultant posts. They are expensive both in terms of salary loss and relocation costs and sources of support need to be identified, especially in light of the high value of the skills acquired to the NHS. We found a median salary deficit per month of £1,500 and median additional non-remunerated monthly costs of £750. We found that fellowships are variably supported by training programme directors and deaneries.

Data suggest that standard training may not fulfil the need for skill development to the required level in all surgical domains and widening access to, availability of and funding for fellowships is required.

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