National survey on endoscopy training in the UK

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ABSTRACT

INTRODUCTION Gastrointestinal (GI) endoscopy is an important skill for both gastroenterologists and general surgeons but concerns have been raised about the provision and delivery of training. This survey aimed to evaluate and compare the delivery of endoscopy training to gastroenterology and surgical trainees in the UK.

METHODS A nationwide electronic survey was carried out of UK gastroenterology and general surgery trainees.

RESULTS There were 216 responses (33% gastroenterologists, 67% surgeons). Gastroenterology trainees attended more non-training endoscopy lists (mean: 3.0 vs 1.2) and training lists than surgical trainees (mean: 0.9 vs 0.5). A significantly higher proportion of gastroenterologists had already achieved accreditation in gastroscopy (60.8% vs 28.9%), colonoscopy (66.7% vs 1.4%) and flexible sigmoidoscopy (33.3% vs 3.0%). More gastroenterology trainees aspired to achieve accreditation in gastroscopy (97.2% vs 79.2%), flexible sigmoidoscopy (91.7% vs 70.1%) and colonoscopy (88.8% vs 55.5%) by completion of training. By completion of training, surgeons were less likely than gastroenterologists to have completed the required number of procedures to gain accreditation in gastroscopy (60.3% vs 91.3%), flexible sigmoidoscopy (64.6% vs 68.6%) and colonoscopy (60.3% vs 70.3%).

CONCLUSIONS This survey highlights marked disparities between surgical and gastroenterology trainees in both aiming for and achieving accreditation in endoscopy. Without changes to the delivery and provision of training as well as clarification of the role of endoscopy training in a surgical training programme, future surgeons will not be able to perform essential endoscopic assessment of patients as part of their management algorithm.

KEYWORDS

Training – Endoscopy – Surgery – Gastroenterology

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Gastrointestinal (GI) endoscopy is an important skill for both gastroenterologists and general surgeons. However, concerns have been raised about the provision and delivery of endoscopy training in the UK.^{1,2} Although medical gastroenterologists perform the majority of GI endoscopic examinations, it is essential that surgeons continue to be trained in this procedure, achieving independent competence to assess their own patients prior to surgery and to make appropriate management decisions. This view is reinforced by guidance from the Association of Upper GI Surgeons and the Association of Coloproctology of Great Britain and Ireland.³

In 1994 the UK Joint Advisory Group on GI Endoscopy (JAG) was set up and tasked with ensuring standards of endoscopy provision in the UK. Over more recent years, it has set clear standards that clinicians need to meet in order to achieve accreditation in both upper and lower GI endoscopy. Nevertheless, a 2010 survey highlighted a predicted shortfall in the number of surgical trainees gaining JAG accreditation prior to completion of specialist training.¹ A

separate study among gastroenterology trainees failed to demonstrate the same problems.⁴

Since then, the JAG has made a number of changes to how training and certification for endoscopic competency are assessed to address some of the perceived disadvantages faced by surgical trainees. The previous volume-based assessment has been replaced by a combined volume and competency assessment, with trainees required to achieve a minimum number of procedures, a proportion of which are formally assessed as a direct observation of procedural skills (DOPS) (Table 1). The certification process has also been streamlined with the development of an online training portfolio (the JAG Endoscopy Training System [JETS]) as well as the introduction of the endoscopy global rating scale to allow direct assessment of quality of training delivered by endoscopy units. However, the effectiveness of these changes has not been directly assessed. This survey therefore aimed to evaluate and compare the delivery of endoscopy training to gastroenterology and surgical trainees in the UK.

Table 1 Selected Joint Advisory Group criteria for accreditation in GI endoscopy

	Gastroscopy	Flexible sigmoidoscopy	Colonoscopy (provisional)
Lifetime number of procedures	200	200	200
Number of formative DOPS assessments	>10	>10	>10
JAG accredited course	<i>Basic Skills in Upper GI Endoscopy</i>	<i>Basic Skills in Lower GI Endoscopy</i>	<i>Basic Skills in Lower GI Endoscopy</i>

GI = gastrointestinal; DOPS = direct observation of procedural skills

Methods

An electronic survey was developed by the Association of Upper GI Surgeons Trainees' Committee, the Dukes' Club (representing trainee colorectal surgeons) and the British Society of Gastroenterology Trainees' Committee. The survey was endorsed by the JAG and was developed to capture demographic data as well as level and availability of training, degree of engagement with the JAG and trainee satisfaction with training. Proxy measures of training quality (as used by the JAG to certify training units) included use of simulators, course attendance, number of index procedures performed, and access to training and non-training endoscopy lists.

Trainees were contacted electronically via their subspecialty organisations and by deanery programme directors. Only one response per individual was allowed. Responses were collected between July 2013 and January 2014. Data were analysed by representatives from each trainee group.

Results

There were 216 responses comprising 72 gastroenterology (33%) and 144 surgical (67%) trainees. All training regions in the UK were represented (median number of trainees per region: 12, range: 1–27).

All trainees were registered on a formal gastroenterology or general surgery training programme, with 28% of gastroenterology and 33% of surgical trainees having completed at least three years of their programme. Five surgical trainees did not intend to train in GI surgery and so were excluded from the final analysis. Declared subspecialty surgical interests included coloproctology ($n=56$, 38.8%), upper GI surgery ($n=42$, 29.2%) and hepatobiliary surgery ($n=24$, 16.7%).

Access to training opportunities

In an average working week, gastroenterology trainees attended more endoscopy lists than surgical trainees (mean: 3.0 vs 1.2). The number of these that were considered dedicated training lists (lists with an increased amount of time allocated to each patient to allow for training) was also higher for gastroenterology trainees (mean: 0.9 vs 0.5). Only 34.7% of surgical trainees undertook regular DOPS assessments as part of their endoscopy training

compared with 55.6% of gastroenterology trainees. Gastroenterology trainees were also more likely than their surgeon counterparts to have used endoscopy simulation as part of their training (79.2% vs 65.2%).

In order to be fully accredited by JAG for GI endoscopy, trainees are expected to have performed at least 200 procedures (Table 1). Only 60.3% of surgical trainees expected this to have happened for oesophagogastrroduodenoscopies (OGDs) prior to completion of training. This figure was 64.6% for flexible sigmoidoscopies and only 45.6% for colonoscopies (Fig 1). The comparable figures for gastroenterology trainees were 91.3%, 68.6% and 73.0%.

Trainee satisfaction with endoscopy training varied between specialties and investigations. Gastroenterology trainees reported considerably higher rates of satisfaction with upper and lower GI training (83.0% and 73.6%) than surgical trainees (59.0% and 43.1%).

Achievement of accreditation

Overall awareness of the JAG criteria required for accreditation in GI endoscopy was good, with 95.6% of surgeons and 98.6% of gastroenterologists aware of the standards required for full accreditation. Use of the online JETS eportfolio was also good with most trainees reporting using

Table 2 Attendance at Joint Advisory Group endoscopy courses by specialty. (Trainees who attend the *Basic Skills in Colonoscopy* course are not required to attend a further flexible sigmoidoscopy course.)

	Gastroenterology trainees	Surgical trainees
<i>Basic Skills in Colonoscopy</i>	66.7%	20.7%
<i>Basic Skills in Upper GI Endoscopy</i>	69.4%	40.0%
<i>Basic Skills in Flexible Sigmoidoscopy</i>	12.5%	6.6%

the system (95.8% of gastroenterology and 87.7% of surgical trainees). However, attendance at mandatory JAG accredited endoscopy training courses remained low (Table 2).

More gastroenterology trainees than surgical trainees aspired to achieve accreditation in gastroscopy (97.2% vs 79.2%), flexible sigmoidoscopy (91.7% vs 70.1%) and colonoscopy (88.8% vs 55.5%). These figures were slightly lower when looking at those who expected to achieve full accreditation by completion of training but they were still higher for gastroenterologists than for surgeons. In terms of those already fully accredited by JAG, a significantly higher proportion of gastroenterologists than surgeons had already achieved accreditation in colonoscopy (66.7% vs 1.4%) and flexible sigmoidoscopy (35.3% vs 3.0%). Accreditation in upper GI endoscopy was also higher for gastroenterology trainees (60.8% vs 28.9%). These variations were not explained by more senior gastroenterology trainees responding to the survey.

Perceived difficulties with training

Reasons for failing to access endoscopy training were broadly similar for surgical and gastroenterology trainees. For both groups, conflicting elective (64% surgery, 43% gastroenterology) and on-call commitments (79% and 64%) were the most common reason for failing to access training. Competition from other trainees (medical and non-medical) was considered less of an obstacle (23% and 28%).

As surgeons continue to provide out-of-hours emergency upper GI bleed cover in many units, trainees were also asked whether they expected to be adequately trained (as distinct from JAG accredited) to provide an emergency endoscopy service on completion of training (Table 3). Although expected competence in diagnostic OGD was high for all groups, competence in therapeutic OGD investigation was much more mixed. It is important to note that it is not possible to achieve JAG accreditation in therapeutic upper GI endoscopy, with competence based on experience and diagnostic OGD accreditation.

Discussion

This study highlights the ongoing issues in the training of the next generation of GI clinicians in endoscopic

Table 3 Proportion of trainees who expect to be adequately trained to provide emergency out-of-hours oesophagogastrroduodenoscopy (OGD) services on completion of training

	OGD	Therapeutic OGD
Oesophagogastric trainees	100%	61.9%
Hepatopancreatobiliary trainees	79.2%	41.7%
Colorectal trainees	67.9%	53.4%
Gastroenterology trainees	83.4%	68.7%

procedures. In an era of continued assessment and revalidation, it seems unlikely that non-accredited endoscopists will continue to be allowed to perform endoscopic examinations. It is therefore vital that problems highlighted by this paper are addressed.

Overall, awareness of the requirements for accreditation were high for all specialties, with surgical trainee engagement with the JAG significantly improved since the previous survey in 2010.¹ Unsurprisingly, the overwhelming majority of gastroenterology trainees aspired to become accredited in both upper and lower GI endoscopy, and felt it was likely that they would do so prior to achieving their Certificate of Completion of Training (CCT). Indeed, a significant proportion of gastroenterology trainees had already achieved JAG accreditation at the time of the survey. By contrast, the proportion of surgical trainees who had already achieved accreditation was much lower.

It was also concerning to note that a sizable minority of GI surgeons did not aspire to achieve accreditation and this may reflect the ambiguity surrounding the role of JAG accreditation in achieving a CCT in general surgery. The 2013 UK general surgery curriculum states: '*Training in diagnostic and therapeutic endoscopy is according to the [JAG]. The knowledge and skills for endoscopy have been defined by the JAG [and] progress will be assessed as any other technical skill in surgical training within the [annual review of competence progression] process.*'⁵ If JAG accreditation were to be made essential for the CCT, this would drive surgical engagement in endoscopy training.

This disconnect between JAG requirements and surgical CCT was further confirmed by a 2014 study of over 180 consecutive adverts for consultant colorectal surgeon posts in the UK.⁶ JAG accreditation in colonoscopy was mandated for only 13% of posts, with a further 23% stipulating only 'training' in colonoscopy. Differing aspirations to achieve accreditation may also be explained by differing subspecialist interests, with lower GI surgeons considering it unnecessary to achieve accreditation in gastroscopy and vice versa. This is supported partially by data on anticipated competence to provide out-of-hours emergency endoscopy cover. However, irrespective of subspecialty, general surgeons are expected to be competent to deal with patients who may be admitted under their care as part of their general surgery emergency on-call duties. Indeed, there is now a growing drive to increase the 'generality' of surgical training to ensure this happens.

Interestingly, more surgeons felt they would be 'competent' to provide out-of-hours emergency cover than those who believed they would achieve JAG accreditation. This provision of emergency cover by non-accredited endoscopists is out of step with the current drive to ensure optimal care for acutely unwell patients 24 hours a day.⁷ If JAG accreditation becomes mandatory for all clinicians performing endoscopy, this scenario would leave a significant shortfall in service provision.

Perhaps unsurprisingly, gastroenterology trainees attended more endoscopy lists than surgical trainees. Belonging to a craft specialty, trainee surgeons are required to spend as much time operating as possible to achieve competence. This conflicting time demand was confirmed by the higher number of surgical trainees who felt their ability to access endoscopy training was limited by other elective commitments. As well as attending more lists, gastroenterology trainees enjoyed more dedicated training lists and reported higher use of DOPS assessments, predicted career procedures and overall satisfaction with endoscopy training. Gastroenterology trainees were also more likely to have used a simulator, which has been shown to improve endoscopic skills.⁸ For both groups, conflicting elective and emergency commitments rather than competition from fellow trainees was felt to be the key barrier to accessing training.

The potential shortfall in surgical endoscopy training highlighted in this survey will require a number of steps to address. We recommend mandatory early registration and active involvement with the JAG for all surgical trainees with a declared GI interest. Completion of the JAG endoscopy course is a requirement for JAG accreditation and consideration must be given for this to become mandatory for surgical trainees. Extra study funding should be made available for trainees attending JAG endoscopy courses. Trainers and trainees should also be proactive in ensuring regular protected training sessions in endoscopy are part of trainees clinical commitments. This should be validated by making endoscopy part of the annual review of competence progression.

In addition, trainees should be encouraged to access endoscopy lists outside their normal clinical team structure. Many service lists are now provided by specialist nurse endoscopists and these can provide additional training opportunities. There is evidence that a high intensity

period of endoscopy training leads to a sustained improvement in performance⁹ and it may be that trainees should be offered a short period of intensive endoscopy training early in their careers to facilitate continued progression. This period could be combined with facilitated attendance at a JAG accredited course and include regular access to an endoscopy simulator.

Conclusions

This survey demonstrates that surgical trainees receive less endoscopy training than their gastroenterology peers, and are therefore less likely to achieve JAG accreditation and competence prior to award of the CCT. Within the confines of a surgical training programme, novel approaches are required to avoid a future shortfall in competent surgical endoscopists. These changes will require increased trainee engagement, national and deanery-led interventions to clarify the role of JAG accreditation in achieving surgical CCT as well as improved training opportunities.

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