

Intercollegiate Committee for Basic Surgical Examinations

2017/18 ANNUAL REPORT

MRCS

**The Membership Examination of the Surgical Royal
Colleges of Great Britain and in Ireland**

DO-HNS

The Diploma in Otolaryngology – Head & Neck Surgery

June 2018

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The Intercollegiate Committee for Basic Surgical Examinations (ICBSE) would welcome comments on this Annual Report and ways in which it can be improved in future years. If you have comments on this Report please send them to: The Chairman, ICBSE, c/o lsmith@icbse.org.uk

1. Introduction

This is the **eleventh** Annual Report of the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) and covers the period August 2017 to July 2018.

The purpose of this Annual Report is to provide a definitive source of information about the Membership Examination of the Surgical Royal Colleges of Great Britain (MRCS) and the Diploma in Otolaryngology – Head & Neck Surgery (DO-HNS) for all interested stakeholders including candidates, trainers, Assigned Educational Supervisors and the general public.

The structure, standard and quality assurance of the MRCS and DO-HNS examinations are the responsibility of the ICBSE which has a number of specialist subgroups each responsible for a different aspect of the examination.

The purpose of ICBSE is as follows:

- To develop and oversee Intercollegiate Membership examinations for assessing the standards of trainees during and at the end point of Core Surgical Training;
- To develop and oversee the DO-HNS examination.

ICBSE's work may be classified into three activities:

- maintaining the quality and standard of the examinations within its remit;
- delivering incremental improvements in service standards;
- developing the examinations within its remit to meet internal and external requirements.

These three activities have equal priority.

More recently, ICBSE has been heavily involved in innovative research around the MRCS including the effects of human factors on examiner performance, and the predictive validity of MRCS in higher surgical training. Prior to this, there was no published work in either of these areas for surgery examinations. Predictive validity work has been published for the medical (MRCP) and GP (MRCPGP) examinations in the UK. The first Intercollegiate Research Fellow was appointed in July 2015, commencing in November 2015 for an 18-month period and it is hoped that a second Intercollegiate Research Fellow will be appointed in the coming year to continue to expand the research portfolio that has grown over the last three years.

2. The MRCS examination: purpose and structure

The Membership Examination of the Surgical Royal Colleges of Great Britain and in Ireland (MRCS) is designed for candidates in the generality part of their specialty training. It is a crucial milestone that must be achieved if trainees are to progress to specialty surgical training as defined by the surgical Specialty Advisory Committees (SACs). The purpose of the MRCS is to determine that trainees have acquired the knowledge, skills and attributes required for the completion of core training in surgery and, for trainees following the Intercollegiate Surgical Curriculum Programme, to determine their ability to progress to higher specialist training in surgery.

It is anticipated that on achievement of the intended outcomes of the curriculum the surgical trainee will be able to perform as a member of the team caring for surgical patients. He or she will be able to receive patients as emergencies, review patients in clinics and initiate management and diagnostic processes based on a reasonable differential diagnosis. He or she will be able to manage the peri-operative care of patients, recognise common

complications and be able to deal with them or know to whom to refer them. The trainee will be a safe and useful assistant in the operating room and be able to perform some simple procedures under minimal supervision and perform more complex procedures under direct supervision.

The MRCS examination has two parts: Part A (written paper) and Part B Objective Structured Clinical Examination (OSCE).

2.1 Part A (written paper)

Part A of the MRCS is a machine-marked, written examination using multiple-choice Single Best Answer and Extended Matching items. It is a five-hour examination consisting of two papers, taken on the same day. The papers cover generic surgical sciences and applied knowledge, including the core knowledge required in all surgical specialties as follows:

Paper 1 - Applied Basic Science (three-hour exam)

Paper 2 - Principles of Surgery-in-General (two-hour exam)

The marks for both papers are combined to give a total mark for Part A. To achieve a pass the candidate is required to demonstrate a minimum level of knowledge in each of the two papers in addition to achieving or exceeding the pass mark set for the combined total mark for Part A.

2.2 Part B (OSCE)

The Part B (OSCE) integrates basic surgical scientific knowledge and its application to clinical surgery. The purpose of the OSCE is to build on the test of knowledge encompassed in the Part A examination and test how candidates integrate their knowledge and apply it in clinically appropriate contexts using a series of stations reflecting elements of day-to-day clinical practice.

3. The MRCS and the Intercollegiate Surgical Curriculum Programme (ISCP)

The MRCS examination is an integral part of the assessment system of the Intercollegiate Surgical Curriculum Programme (ISCP) <http://www.iscp.ac.uk>. Ten surgical specialties: cardiothoracic surgery; general surgery; neurosurgery; oral & maxillofacial surgery; otolaryngology; paediatric surgery; plastic surgery; urology; vascular; and trauma & orthopaedic surgery collaborate through the ISCP in developing a competence-based curriculum which defines the attributes required of a successful surgeon. The web-based ISCP curriculum and its assessment system, including the MRCS and DO-HNS, have been approved by the General Medical Council (GMC).

The MRCS content has been reviewed to ensure that it continues to articulate with the changes to ISCP and will continue to do so via the MRCS Assessment Review that has taken place during 2017/18. During 2018, the MRCS assessment blueprint has been mapped to the Generic Professional Capabilities (GPCs) framework described in the GMC May 2017 document: Excellence by Design: Standards for Postgraduate Curricula. The MRCS Content Guide continues to set out for candidates a comprehensive description of the breadth and depth of the knowledge, skills and attributes expected of them, and thus provides a framework around which a programme of preparation and revision can be structured. It also sets out the areas in which candidates will be examined. It has been formatted to maximise its accessibility to candidates and examiners and is available on the intercollegiate website at <https://www.intercollegiatemrcsexams.org.uk/mrcs/candidate-guidance/>

4. The MRCS Examination

4.1 Part A (written paper)

Based on the ISCP curriculum, a syllabus blueprint for the Part A examination sets out a broad specification for the numbers of questions on each topic to be included in each paper of the examination. It is not possible to sample the entire syllabus within a single Part A paper but the blueprint and specification ensures that the common and important content is routinely covered and that the entire syllabus is sampled over time.

Questions are coded according to the area of the syllabus to which they relate and are held in a computerised item bank. Groups of question writers are commissioned to produce new questions according to the agreed specification and, following editing and specialist review, these questions are added to the item bank. For each diet of the examination questions are selected from the bank using the examination blueprint and are compiled into a paper by the MCQ question paper group of the ICBSE.

Questions are carefully planned from the outset to be at an appropriate level of difficulty. The standard for the paper is originally set using a modification of the Angoff procedure where a group of colleagues estimate the performance of a notional 'just good enough to pass' candidate. In order to ensure that standards are set at an appropriate and realistic level the colleagues include practising surgeons, specialist basic scientists, trainers, trainees and a patient representative.

A number of 'marker' questions taken from a previous examination are included in each Part A paper and are used to calibrate the standard and help to ensure that there is continuity in the standard of the examination over time.

Following each examination a standard setting meeting is held at which the performance of candidates on each question is scrutinised together with their performance on the test overall. A range of statistical measures is used to evaluate the reliability and facility of the examination and its individual questions. It is at this stage that candidate feedback on the examination is considered and taken into account when deciding whether or not to exclude a specific question from the overall examination outcome. Using the benchmark of the previously described Angoff exercise, the performance of candidates on the marker questions is reviewed together with other statistical data from the present and previous examinations to set the pass/fail cut-off mark.

Candidates are given their Part A score and the score required to pass the examination, thus giving them an indication of how far short of, or above, the required standard they are. In addition, candidates are provided with their score in the main broad content areas (BCAs) along with the average score of all candidates in those BCAs within their cohort. This feedback is provided to both unsuccessful and successful candidates to allow trainees to reflect on their performance in the exam and for their future professional development.

2017/8 Part A (written paper) Review of Activity

During recent years, extensive work was carried out by the Content Review Group to review the question bank and the format of the Part A (MCQ) examination.

As a result of the work carried out ICBSE introduced a revised test specification (blueprint) of the Part A examination in January 2017, which most notably changed balance of the exam by increasing the Applied Basic Science section and extending the assessment time from four hours to five hours.

In addition, the GMC agreed in 2017, to the discontinuation of the extended matching questions (EMQs) within the MCQ paper. The Part A exam will now be entirely single best answer with the format change commencing from the September 2018 examination.

One of the main work streams of the MCQ Sub Group over the past year has been the investigations into the potential delivery of the Part A exam electronically. The MCQ paper is currently delivered in paper format and the Sub Group has been keen to investigate the potential benefits of computer-based testing (CBT) and have been working to develop a tender specification in order to help inform the four Surgical Royal Colleges. Utilising different question formats and increasing the exam content security are potential benefits and work in this area will continue in the coming year.

Summary descriptive statistics: MRCS Part A (written paper)

	Total number sat	Passing % (and number)	Failing % (and number)	Pass mark %	Measure of reliability*	Measurement error**
September 2017	2687	37.4 (1005)	62.6 (1682)	70.9	0.95	7.31
January 2018	1877	34.8 (651)	65.2 (1226)	70.5	0.95	7.34
April 2018	2082	32.9 (684)	67.1 (1398)	70.9	0.96	7.34

* An expression of the consistency and reproducibility (precision) of the examination. The measure used here is KR-20.

** Measurement error refers to the difference between the 'true' score and the score obtained in an assessment. Measurement error is present in all assessments but is minimised by good item design and test construction.

4.2 Part B (OSCE)

A team of Broad Content Area (BCA) specialists, headed by leads and deputies using detailed templates and following detailed writing guidance, develop scenarios and questions for the OSCE stations. Draft scenarios are scrutinised by a team of reviewers before being approved for piloting. All scenarios are piloted either as an unidentified extra station in a 'live' examination or as part of a specially arranged event. Following further revision as necessary, these new scenarios are then added to the question bank.

Scenarios from the bank are then selected and grouped into examination 'circuits' so as to achieve the appropriate balance of content and difficulty. A number of different circuits are selected for use throughout the examination period, with the same circuit used in each of the Colleges on any given day. Each 'circuit' is taken by a statistically significant number of candidates for quality assurance purposes.

At the end of each examination diet, the results of all candidates in each 'circuit' are combined and the pass/fail boundaries are agreed at a single standard setting meeting attended by the BCAs and representatives from each of the Colleges. ICBSE continues to review and further develop the MRCS examination based on the evidence available. In December 2010 it established a working party to undertake a review of the examination programme to commence after three diets of the May 2010 revision;

evidence for the proposed changes was based on six diets of the examination (May 2010 to February 2012). The review cycle for the exam continued in 2017/18 when the OSCE Review Panel reconvened to consider advancements and improvements to the exam which will result in a GMC submission during 2018/19.

2017/18 Part B (OSCE) Review of Activity

Activity relating to the MRCS Part B (OSCE) during 2017/18 concentrated on the review of procedures and the developmental QA projects, most notably in the areas below:

- A pilot study in to the remote monitoring of the MRCS Part B (OSCE) exam has been ongoing throughout the year and will continue in to 2018/19. It is hoped that the technology will allow for the quality assurance of the examiner performance by remotely monitoring the candidate interactions and prove to be less intrusive to candidates and less intimidating to examiners than having an ICBSE QA Assessor in the examination room.
- ICBSE have formed a short-life working group to investigate the potential use of anatomical models in the MRCS Part B (OSCE) exam. Discussions and further investigations will continue to identify suitable anatomical models or video imaging to enhance the exam experience.
- OSCE Sub Group have been developing a Rasch analysis of the examiner marking designed to complement the existing regression analysis, which highlights those examiners who may be harsh or lenient markers with the aim of calibrating their marking standard.
- ICBSE, after agreement from the GMC, increased the number of OSCE 'circuits' used during each exam window to ensure the integrity of the exam.
- Internal Quality Assurance committee set up a short-life working group to develop enhanced candidate feedback. The enhanced Part A feedback was rolled out last year and the group continued to develop the increased Part B (OSCE) feedback which aims to provide an indication of performance by the Broad Content Areas of the exam.
- The Colleges have been, and will continue to investigate the potential of the electronic capture of the candidate marks within the MRCS Part B (OSCE) exam.

Standard Setting

Each standard setting meeting continues to begin with an analysis of the level of discrimination and facility of each of the OSCE circuits and their constituent stations, including a review of candidate, examiner and assessor feedback, to ensure consistency and comparability of demand.

Each candidate's performance on each of the examined stations continues to be assessed in two ways:

- a mark is awarded using a structured mark sheet containing assessment criteria for each content area and for each assessed domain;
- an overall judgement is given using one of the categories: pass, borderline or fail.

The following information is therefore available for each candidate:

- a total mark for each station;
- a category result for each station i.e. pass, borderline, fail;
- a total mark for the OSCE;
- a total mark for each of the two combined BCAs, described by the shorthand, 'Knowledge' and 'Skills'.

The borderline regression method of standard setting is used to determine the contribution of each station to the pass mark. These contributions are summed to give a notional pass mark for each of Knowledge and Skills for each 'circuit'.

The review of the OSCE carried out in 2012 had concluded that using the borderline regression method and adding 0.5 Standard Error of Measurement (SEM) to each broad content area pass mark retained the previous rigour. This position had been accepted by the GMC, as was the recognition that the ICBSE would retain some flexibility in the multiple of the SEM to be used based on an evaluation of all of the available evidence.

The experience of the first examination conducted under the revised rules (that of February 2013) was that the addition of 0.5 SEM to each of Knowledge and Skills did not maintain the previous standard and it was agreed that the multiple to be used should be 0.84 SEM. It was further agreed that the addition of 0.84 SEM should remain the default position until evidence suggested that it should be changed, and this figure has been used in all subsequent examinations. It may be noted that, because both Knowledge and Skills have to be passed at the same sitting, the SEM for the OSCE as a whole may be considered to be in excess of the 1.0 value widely accepted as the desirable minimum.

To safeguard the interests of patients, and as a driver to learning, it is a GMC requirement for passing the OSCE that candidates must achieve a minimum level of competence in each broad content area at the same examination.

Since its inception, the MRCS Part B OSCE examination has used a single pass rule at each examination session, even though the form of the test (circuit) has not been identical on every day of that examination session. Parity of standards has been maintained through statistical methods and through the scrutiny by assessors.

To further enhance the standard setting process ICBSE, with GMC approval, agreed that a different pass mark should be generated (using the current borderline regression methodology) by circuit, rather than for the examination as a whole. This means that, though the pass mark will be similar for different circuits, it is unlikely to be identical. This will reflect the variation in the relative difficulties of the scenarios that make up any given circuit. The consequences of doing so have been modelled and found to yield a very similar overall pass rate.

This current standard setting process for the MRCS Part B came in to effect as of October 2014 examination.

Each candidate is given detailed feedback showing their mark on each broad content area (Knowledge and Skills) and for the OSCE overall. However, as part of a wider ICBSE policy to expand the feedback provided to candidates, a phased approach to provide the MRCS Part B candidates with feedback by broad content area was developed during 2015-16. It is envisaged that ICBSE will be able to deliver the extended Part B (OSCE) feedback in the forthcoming year.

In addition, the OSCE Sub Group monitor and analyse the performance of the OSCE scenarios during the standard setting process. A chart has been developed which combines the written feedback and the scenario performance data. The resulting document enables the Sub Group to make an informed decision when agreeing the pass mark.

Summary descriptive statistics: MRCS Part B (OSCE)

	Total number sat	Passing % (and number)	Failing % (and number)	Pass mark % (range for all circuits)	Measure of reliability* (range for all circuits)	Measurement error** raw (range for all circuits)
October 2017	363	64.7 (235)	35.3 (128)	Knowledge: 66.9-70.0 Skills: 64.0-65.5	Knowledge: 0.60-0.74 Skills: 0.70-0.78	Knowledge: 7.2-8.6 Skills: 8.7-9.5
February 2018	388	67.8 (263)	32.2 (125)	Knowledge: 67.5 – 70.6 Skills: 63.5-65.0	Knowledge: 0.62 - 0.80 Skills: 0.63 - 0.81	Knowledge: 7.0 - 8.5 Skills: 9.2 - 10.3
May 2018	465	68.2 (317)	31.8 (148)	Knowledge: 65.6-69.4 Skills: 64.0-65.0	Knowledge: 0.67-0.76 Skills: 0.61-0.82	Knowledge: 6.7-8.2 Skills: 7.9-9.7

* An expression of the consistency and reproducibility (precision) of the examination. The measure used here is Cronbach's alpha.

** Measurement error refers to the difference between the 'true' score and the score obtained in an assessment. Measurement error is present in all assessments but is minimised by good item design and test construction.

5. The Diploma in Otolaryngology – Head & Neck Surgery (DO-HNS)

The Diploma in Otolaryngology – Head and Neck Surgery (DO-HNS) was established as an intercollegiate examination in April 2008. Its purpose is to test the breadth of knowledge, the clinical and communication skills and the professional attributes considered appropriate by the Colleges for a doctor intending to undertake practice within an otolaryngology department in a trainee position. It is also intended to provide a test for those who wish to practise within another medical specialty, but have an interest in the areas where that specialty interacts with the field of otolaryngology. It is also relevant for General Practitioners wishing to offer a service in minor ENT surgery.

MRCS (ENT)

With effect from August 2011, trainees who have achieved a pass in Part A of the Intercollegiate MRCS examination **and** a pass in Part 2 of the Intercollegiate DO-HNS examination have been eligible to apply for **MRCS (ENT)** membership of one of the Royal Surgical Colleges.

It is a crucial milestone that must be achieved if trainees are to progress to specialty surgical training as defined by the surgical Specialty Advisory Committees (SACs). The purpose of the MRCS (ENT) is to determine that trainees have acquired the knowledge, skills and attributes required for the completion of core training in surgery and, for trainees following

the Intercollegiate Surgical Curriculum Programme, to determine their ability to progress to higher specialist training in otolaryngology.

It is anticipated that on achievement of the intended outcomes of the curriculum the surgical trainee will be able to perform as a member of the team caring for ENT surgical patients. He or she will be able to receive patients as emergencies, review patients in clinics and initiate management and diagnostic processes based on a reasonable differential diagnosis. He or she will be able to manage the peri-operative care of patients, recognise common complications and be able to deal with them or know to whom to refer them. The trainee will be a safe and useful assistant in the operating room and be able to perform some simple 3 procedures under minimal supervision and perform more complex procedures under direct supervision.

The Intercollegiate DO-HNS examination has two parts:

Part 1 – Written Paper comprising Multiple True/False Questions and Extended Matching Questions in one paper to be completed in two hours.

Part 2 – Objective Structured Clinical Examination (OSCE) normally comprising approximately 25 bays of seven minutes' duration each.

Standard setting the DO-HNS examination

The standard setting procedure for the DO-HNS Part 1 written paper is very similar to that described above for the MRCS (see 4.1 above) and is based on an initial Angoff process, the use of marker questions and the scrutiny of individual items and statistics at a standard setting meeting.

The standard setting technique used in the OSCE to determine the pass mark is an Angoff process: all examiners determine a pass mark for each station based upon the minimum level of competence expected of an ENT trainee at the end of his/her CT2/ST2 post and before entry to higher surgical training or just at the start of higher surgical training. Using this method, at least 12–15 examiners will ascribe a pass mark to each station. The marks are totalled and averaged and this then determines the region of the pass mark. The final pass mark is determined by inspection of the mark distribution around the Angoff pass mark.

2017-18 DO-HNS Examination Review of Activity

During 2017/18 the Part 2 OSCE was held in Glasgow in October 2017, Ireland in February 2018 and Edinburgh in May 2018.

The DO-HNS examination continues to review its processes and has implemented a number of initiatives over the preceding year. Areas of development have included the use of anatomical models within the examination in order to enhance the experience for the candidate.

The DO-HNS Sub Group continue to monitor and developed the Part 1 and Part 2 question banks and held their two-day annual review meeting in March 2018. They have also liaised with the four Surgical Royal Colleges to improve the recruitment and induction processes for new examiners in order to expand the examiner cohort to meet the examining demand.

The first DO-HNS Review Panel meeting took place in May 2018 and the group will continue to meet in the year to come to discuss the future development of both DO-HNS and the MRCS (ENT).

Summary descriptive statistics

DO-HNS Part 1 (written)

	Total number sat	Passing % (and number)	Failing % (and number)	Pass mark %	Measure of reliability*	Measurement error** % (raw)
Sep-17	33	69.7 (23)	30.3 (10)	73.1	0.88	2.15 (6.62)
Jan-18	28	75.0 (21)	25.0 (7)	75.5	0.92	2.13 (6.53)
Apr-18	17	88.2 (15)	11.8 (2)	71.4	0.92	2.22 (6.75)

* An expression of the consistency and reproducibility (precision) of the examination. The measure used here is KR-20.

** Measurement error refers to the difference between the 'true' score and the score obtained in an assessment. Measurement error is present in all assessments but is minimised by good item design and test construction.

DO-HNS Part 2 (OSCE)

	Total number sat	Passing % (and number)	Failing % (and number)	Pass mark %	Measure of reliability*	Measurement error** % (raw)
Oct-17	84	53.57 (45)	46.43 (39)	Day 1: 70.7	Day 1: 0.72	Day 1: 2.32 (12.76)
				Day 2: 71.1	Day 2: 0.77	Day 2: 2.52 (13.86)
Feb-18	64	59.38 (38)	40.62 (26)	Day 1: 70.0	Day 1: 0.68	Day 1: 2.48 (13.64)
May-18	87	44.83 (39)	55.17 (48)	Day 1: 72.2	Day 1: 0.75	Day 1: 2.37 (13.02)
				Day 2: 71.6	Day 2: 0.62	Day 2: 2.39 (13.12)

* An expression of the consistency and reproducibility (precision) of the examination. The measure used here is Cronbach's alpha.

** Measurement error refers to the difference between the 'true' score and the score obtained in an assessment. Measurement error is present in all assessments but is minimised by good item design and test construction.

6. Quality Assurance

6.1 The role of the Internal Quality Assurance Committee (IQA)

The quality of the MRCS and DO-HNS examinations is monitored by the ICBSE's intercollegiate Internal Quality Assurance Committee (IQA). The IQA meets three times each year and receives, for each part of the examinations, the following information:

- overall pass rates and descriptive statistics for the latest diet and previous diets;
- a breakdown of the feedback from the candidates and examiners
- quality assurance reports from the Assessor group
- The Chair reports and minutes from the examination sub groups

After each examination, every candidate is invited to complete an anonymous feedback questionnaire. Examiners are invited to complete similar questionnaires. The IQA receives and reviews the feedback from examiners and candidates and correlates them with the statistical information on the examination. IQA also receives a feedback report from the Assessors for each diet of examinations, which provides feedback on the utilities along with the performance of the scenarios and examiners.

In its interpretation of the data on the examination, the IQA is advised and assisted by an independent Educational Consultant who analyses the information and writes a brief report on each part of the examination, drawing any potential anomalies to the attention of the Committee for consideration and action.

The IQA Committee will refer matters which it considers to be in need of attention or further scrutiny to the appropriate subgroups of ICBSE. It also makes regular reports and recommendations to the ICBSE, which has overall responsibility for the MRCS and DO-HNS examinations.

It is also the remit of the IQA Committee to review and implement the JSCM Equality and Diversity policy.

6.2 Assessors

Independent Assessors, established by IQA in 2010/11, attend every diet of the MRCS Part B (OSCE) and DO-HNS Part 2 at each College. Their role is to:

- monitor, evaluate and provide feedback on the conduct and performance of examiners in all components of the MRCS and DO-HNS to ensure that the highest possible standards of examining are achieved and maintained;
- act as guardians of standards for the intercollegiate examinations over time and across examination venues;
- enhance the professional experience of examiners by encouraging reflective practice;
- act as mentors for new examiners to help them build confidence and develop into the role;
- provide feedback to examiners via the examiner's feedback reports issued after each diet;
- assist in the review of the assessments used to enhance the comparability, validity and reliability of the examinations.

Considerable activity has gone in to investigating the potential for remote monitoring of the MRCS Part B (OSCE) that would allow Assessors to monitor the examiners from a separate

room. It is hoped that the system will be less intimidating to the examiners and less obtrusive to the candidates but further research in to the utility and deliverability is required.

The Annual meeting of ICBSE MRCS Assessors took place at the Royal College of Surgeons of Edinburgh on 26th February, 2018.

2017/18 IQA Review of Activity

In addition to the examinations specific development projects outlined previously in this report the Internal Quality Assurance (IQA) committee has continued its activity in the following areas:

6.3 Equality & Diversity

With the introduction of the Joint Surgical Colleges Meeting (JSCM) Equality and Diversity Policy in July 2013, the ICBSE have undertaken and completed multiple Equality & Diversity work streams since 2013 to ensure all MRCS and DO-HNS processes match best practice wherever possible.

6.3.1 Equality & Diversity examiner training

ICBSE commissioned the development of an examination-specific training programme to enhance awareness of Equality and Diversity issues while examining. This will help to ensure that all candidates experience a fair examination and mitigate against the risk of any unintended bias within the examination. IQA, in conjunction with the Surgical Royal Colleges, continue to monitor the completion rate and will review and update the material during the year ahead.

6.3.2 Review and improve the collection and monitoring of equal opportunities data

In addition to the ongoing analysis by the GMC of trainee examinations outcomes, ICBSE continue to review the processes for collecting and monitoring the Equal Opportunities (EO) data collected from the candidature and examiners. The reporting of the first set of enhanced EO data was included in the 2014-15 ICBSE Annual Report and continues to be monitored and published. A further set of enhanced data for 2018 is included in Appendix 1 below.

6.4 Review of the MRCS Part B (OSCE) Exam

The last major review of the MRCS Part B (OSCE) exam, carried out in 2011, resulted in a GMC Change Submission that took effect from February 2013. As part of this process the GMC stipulated that the MRCS Part B (OSCE) should remain constant for a period of five years to provide continuity to candidate preparation.

A review of the MRCS Part A exam took place in 2015 with a change to the examination implemented in 2017. Therefore, the focus for the MRCS Review this year has been on the OSCE exam. The MRCS Review Panel split the review in to three working groups who have met four times during 2017/18 these working groups responsibilities were split in to the areas below:

- Blueprinting
- Questions, exam format and standard setting
- Delivery, feedback and reporting

This MRCS Review recommendations will be presented to ICBSE for discussion and agreement at the July 2018 committee meeting.

6.5 Research

The ICBSE, with the support from the four Surgical Royal Colleges, embarked on a process of improving the surgical research portfolio to match the activity of other postgraduate medical institutions. As such, an Intercollegiate Research Fellow was recruited in 2015 and has embarked on several research projects primarily looking at the predictive validity of the MRCS examination. The Fellow has constructed a database of MRCS Part A and B UK candidate activity from 2008 to the present including scores, number of attempts, pass rates, demographics, stage of training, medical school and Deanery. Professor Peter Brennan was appointed to a newly designated post of ICBSE Research Lead in 2017.

In addition to the above, access has been granted by the GMC to UKMED in order to investigate the potential relationship between medical school performance and performance in the MRCS. Finally, ICBSE has agreement to share the FRCS data to compare the predictive validity against MRCS performance which will provide a complete picture of performance trends throughout the surgical pathway.

A second Intercollegiate Research Fellow will be recruited during 2018/19 to expand the ICBSE research activity as outlined above.

A list of recent ICBSE Research-related publications is included below:

1. Scrimgeour D, Cleland J, Lee AJ, Brennan PA. Predictors of success in the Intercollegiate Membership of the Royal College of Surgeons (MRCS) examination. *Ann R Coll Surg Engl*. 2018 Apr 1:1-4.
2. Scrimgeour DSG, Higgins J, Bucknall V, Arnett R, Featherstone CR, Cleland J, Lee AJ, Brennan PA. Do surgeon interviewers have human factor-related issues during the long day UK National Trauma and Orthopaedic specialty recruitment process? *Surgeon*. 2018 Mar 5. pii: S1479-666X(18)30021-0.
3. Scrimgeour DSG, Cleland J, Lee AJ, Brennan PA. Which factors predict success in the mandatory UK postgraduate surgical exam: The Intercollegiate Membership of the Royal College of Surgeons (MRCS)? *Surgeon*. 2017 Oct 25. pii: S1479-666X(17)30134-8.
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Frank Smith, ICBSE Chair
Lee Smith, ICBSE Manager
2 July 2018

PROTECTED CHARACTERISTICS: EXAMINERS/ASSESSORS AND CANDIDATES AT 20 JUNE 2018*Candidate statistics: candidates in 2018 for each stage or type of exam***AGE PROFILE - EXAMINERS/ASSESSORS**

	Edin	England	Glasgow	Ireland	TOTAL	%
30-39	<5	6	<5	7	15	1.2%
40-49	94	75	41	51	261	21.2%
50-59	213	172	71	62	518	42.0%
60-69	93	94	29	34	250	20.3%
70+	13	25	5	6	49	4.0%
Unspecified	26	50	29	35	139	11.3%
Total	440	422	176	195	1233	

AGE PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
20-29	1004	1500	83	385	2972	53.5%
30-39	759	1100	57	353	2269	40.9%
40-49	91	120	11	52	274	4.9%
50-59	14	13	<5	<5	33	0.6%
60-69	<5	<5	<5	<5	4	0.0%
70+	0	0	0	0	0	0.0%
Unspecified	0	0	0	0	0	0.0%
Total	1870	2734	153	795	5552	

GENDER PROFILE - EXAMINERS/ASSESSORS

	Edin	England	Glasgow	Ireland	TOTAL	%
Female	52	69	23	42	186	15.1%
Male	386	352	153	153	1044	84.7%
Prefer not to say	<5	<5	<5	<5	<5	0.1%
Total	440	422	176	195	1233	

GENDER PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Female	543	795	64	187	1589	28.6%
Male	1222	1808	87	602	3719	67.0%
Prefer not to say	27	<5	<5	<5	29	0.5%
Transgender	<5	6	<5	<5	7	0.1%
Unspecified	78	123	<5	5	208	3.7%
Total	1601	2552	112	737	5552	

MARITAL STATUS PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
Civil Partnership	<5	<5	<5	<5	<5	0.0%
Cohabiting	<5	<5	<5	<5	6	0.5%
Married	182	69	51	54	356	28.9%
Prefer not to say	<5	<5	5	<5	11	0.9%

MARITAL STATUS PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Civil Partnership	18	<5	<5	<5	19	0.4%
Cohabiting	26	62	<5	<5	120	2.4%
Married	495	374	33	17	919	18.4%
Prefer not to say	77	70	<5	<5	153	3.1%

Appendix 1

Separated/Divorced	6	<5	<5	<5	15	1.2%
Single	16	7	<5	9	33	2.7%
Unspecified	231	339	114	126	810	65.7%
Widowed	<5	<5	<5	<5	<5	0.1%
Total	440	422	176	195	1233	

Separated/Divorced	8	6	<5	<5	14	0.3%
Single	739	770	59	27	1595	31.9%
Unspecified	237	1269	13	689	2208	44.1%
Widowed	<5	<5	<5	<5	<5	0.0%
Total	1601	2552	112	737	5002	

SEXUAL ORIENTATION PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
Bisexual	<5	<5	<5	<5	7	0.6%
Heterosexual	283	176	88	123	670	54.3%
Homosexual	<5	<5	<5	<5	<5	0.1%
Prefer not to say	9	6	6	<5	25	2.0%
Unspecified	146	237	80	65	528	42.8%
Total	440	422	176	195	1233	

SEXUAL ORIENTATION PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Bisexual	19	33	<5	<5	57	1.0%
Heterosexual	1380	1869	131	87	3467	62.4%
Homosexual	<5	21	<5	<5	23	0.4%
Prefer not to say	389	208	12	13	622	11.2%
Unspecified	81	603	7	692	1383	24.9%
Total	1870	2734	153	795	5552	

RELIGIOUS PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
Buddhist	16	<5	<5	8	27	2.2%
Christian	108	54	25	47	234	19.0%
Hindu	68	28	29	22	147	11.9%
Jewish	<5	<5	<5	<5	<5	0.2%
Muslim	42	48	19	37	146	11.8%
No religion	32	12	5	9	58	4.7%
Other	5	<5	7	<5	18	1.5%
Prefer not to say	5	<5	5	<5	17	1.4%
Sikh	<5	<5	2	<5	14	1.1%
Unspecified	158	267	83	61	569	46.1%
Total	440	422	176	195	1233	

RELIGIOUS PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Buddhist	114	36	<5	7	160	2.9%
Christian	337	492	41	18	888	16.0%
Hindu	319	293	21	5	638	11.5%
Jewish	<5	9	<5	<5	11	0.2%
Muslim	594	717	34	64	1409	25.4%
No religion	101	334	30	8	473	8.5%
Other	75	60	12	<5	151	2.7%
Prefer not to say	253	169	8	5	435	7.8%
Sikh	9	21	<5	<5	32	0.6%
Unspecified	66	603	<5	683	1355	24.4%
Total	1870	2734	153	795	5552	

DISABILITY PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
No	383	195	95	138	811	65.8%
Partial	<5	<5	<5	<5	<5	0.1%
Unspecified	53	222	79	57	411	33.3%
Yes	<5	<5	<5	<5	8	0.6%
Total	440	422	176	195	1233	

DISABILITY PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
No	1805	2166	141	217	4329	78.0%
Partial	31	49	<5	<5	84	1.5%
Unspecified	18	486	7	575	1086	19.6%
Yes	16	33	<5	<5	53	1.0%
Total	1870	2734	153	795	5552	

ETHNICITY - EXAMINERS AND ASSESSORS

<u>With GMC/IMC Number</u>	<u>Edin.</u>	<u>England</u>	<u>Glasgow</u>	<u>Ireland</u>	<u>TOTAL</u>	<u>%</u>
Asian or Asian British	110	56	57	25	248	30.0%
Black / African / Caribbean / Black British	9	<5	<5	<5	15	1.8%
Mixed / Multiple Ethnic Groups	24	7	<5	5	39	4.7%
Other Ethnic Group	17	14	<5	6	38	4.6%
Prefer not to say	<5	<5	<5	<5	<5	0.2%
Unspecified	53	125	45	30	253	30.6%
White	110	53	37	31	231	27.9%
Total	325	258	145	100	828	99.7%

ETHNICITY - CANDIDATES (calendar year 2017)

<u>With GMC/IMC Number</u>	<u>Edinburgh</u>	<u>England</u>	<u>Glasgow</u>	<u>Ireland</u>	<u>TOTAL</u>	<u>%</u>
Asian or Asian British	140	373	14	6	533	23.5%
Black / African / Caribbean / Black British	22	90	<5	<5	113	5.0%
Mixed / Multiple Ethnic Groups	28	125	10	<5	165	7.3%
Other Ethnic Group	36	101	<5	<5	141	6.2%
Prefer not to say	66	53	<5	<5	124	5.5%
Unspecified	21	279	24	26	350	15.5%
White	219	566	40	13	838	37.0%
Total	532	1587	91	54	2264	100.0%

<u>No GMC/IMC Number</u>	<u>Edin.</u>	<u>England</u>	<u>Glasgow</u>	<u>Ireland</u>	<u>TOTAL</u>	<u>%</u>
Asian or Asian British	39	22	6	23	90	22.2%
Black / African / Caribbean / Black Br.	<5	<5	<5	<5	8	2.0%
Mixed / Multiple Ethnic Groups	17	<5	<5	15	36	8.9%
Other Ethnic Group	7	31	<5	11	52	12.8%
Prefer not to say	<5	<5	<5	<5	<5	0.2%
Unspecified	28	76	10	28	142	35.1%
White	20	28	12	16	76	18.8%
Total	115	164	31	95	405	100.0%

<u>No GMC/IMC Number</u>	<u>Edinburgh</u>	<u>England</u>	<u>Glasgow</u>	<u>Ireland</u>	<u>TOTAL</u>	<u>%</u>
Asian or Asian British	649	362	30	41	1082	32.9%
Black / African / Caribbean / Black Br.	46	42	<5	5	94	2.9%
Mixed / Multiple Ethnic Groups	82	49	<5	20	152	4.6%
Other Ethnic Group	113	344	14	42	513	15.6%
Prefer not to say	228	34	<5	7	270	8.2%
Unspecified	194	295	10	624	1123	34.2%
White	26	21	5	<5	54	1.6%
Total	1338	1147	62	741	3288	100.0%

<u>All Examiners/Assessors</u>	Edin.	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	149	78	63	48	338	27.4%
Black / African / Caribbean / Black Br.	13	<5	<5	<5	23	1.9%
Mixed / Multiple Ethnic Groups	41	11	<5	20	75	6.1%
Other Ethnic Group	24	45	<5	17	90	7.3%
Prefer not to say	<5	<5	<5	<5	5	0.2%
Unspecified	81	201	55	58	395	32.0%
White	130	81	49	47	307	24.9%
Total	440	422	176	195	1233	99.8%

Appendix 1

<u>All Candidates</u>	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	789	735	44	47	1615	29.1%
Black / African / Caribbean / Black Br.	68	132	<5	5	207	3.7%
Mixed / Multiple Ethnic Groups	110	174	11	22	317	5.7%
Other Ethnic Group	149	445	14	46	654	11.8%
Prefer not to say	294	87	<5	10	394	7.1%
Unspecified	215	574	34	650	1473	26.5%
White	245	587	45	15	892	16.1%
Total	1870	2734	153	795	5552	100.0%