

Intercollegiate Committee for Basic Surgical  
Examinations

## **2018/19 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 2019**

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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 [gayre@icbse.org.uk](mailto:gayre@icbse.org.uk)*

## **1. Introduction**

This is the **twelfth** Annual Report of the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) and covers the period August 2018 to July 2019.

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. 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 perioperative 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 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).

An MRCS Assessment Review took place during 2017/18 and 2018/19, to ensure that MRCS content continues to articulate with changes to ISCP. During 2018, the MRCS assessment blueprint was 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 maintain the standard of the examination between full applications of the Angoff procedure.

Following each examination, a 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.

### **2018/19 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 is now 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 investigation 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 has worked to build a business case for adoption of computer-based testing for the MRCS Part A. Utilising different question formats and increasing exam content security are potential benefits. 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 2018	2794	33.2 (928)	66.8 (1866)	70.3	0.95	7.41
January 2019	2182	38.8 (847)	61.2 (1335)	71.5	0.95	7.30
April 2019	2372	39.0 (925)	61.0 (1447)	71.9	0.96	7.32

\* 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. The measurement error here is expressed as a score out of 300.

## 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 pass/fail boundaries are agreed at a 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 resulted in a GMC submission that was heard in June 2019, with a decision expected in July 2019. The full GMC submission can be obtained as a separate document from ICBSE. A summary of major changes is included in the bullet points below and in Section 6.4 of this report. The proposed changes to the exam will be implemented during 2019/20 and 2020/21.

### **2018/19 Part B (OSCE) Review of Activity**

Activity relating to the MRCS Part B (OSCE) during 2018/19 concentrated on the review of procedures and the developmental QA projects, most notably in the areas below:

- A pilot study into the remote monitoring of the MRCS Part B (OSCE) exam has been ongoing throughout the year and will continue into 2019/20. It is hoped that the technology will allow for the quality assurance of the examiner performance by remotely monitoring interactions with the candidate. It is envisaged that use of this technology may prove to be less intrusive to candidates, and less intimidating to examiners, than having an ICBSE QA Assessor in the examination room.
- ICBSE formed a short-life working group to investigate the potential use of anatomical models in the MRCS Part B (OSCE) exam. In 2018/19, the group came up with a set of recommendations relating to when and which anatomical models can be used in place of anatomical specimens. These were approved and have been disseminated to the Colleges to be actioned.
- The Internal Quality Assurance committee set up a short-life working group to develop enhanced candidate feedback. The enhanced Part A feedback was deployed in 2017, and the group developed the increased Part B (OSCE) feedback with the aim providing an indication of performance by the Broad Content Areas of the exam. This was rolled out from the February 2019 diet onwards.
- 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. A potential supplier has been identified, and technical investigations are ongoing to ascertain the feasibility introducing this.
- The MRCS OSCE Review Panel has submitted a GMC CAG submission following the work it has been carrying out since 2017. The main recommendations of the Panel are to reduce the number of physical examination stations from four to three (reducing the number of assessed station from 18 to 17); incorporate Health Promotion into the ICBSE MRC Syllabus; and to incorporate Patient Safety into both Anatomy and Procedural Skills stations.

### **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.

At its inception, the MRCS Part B OSCE examination used a single pass rule at each examination session, even though the form of the test (circuit) was not identical on every day of that examination session. Parity of standards was maintained through statistical methods and through 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 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. ICBSE delivered the extended Part B (OSCE) feedback from the February 2019 diet.

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 that 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 2018	396	65.7 (260)	34.3 (136)	Knowledge: 66.9-69.4 Skills: 65.0-65.5	Knowledge: 0.59-0.80 Skills: 0.71-0.74	Knowledge: 7.1-8.2 Skills: 8.3-10.1
February 2019	364	72.0 (262)	28.0 (102)	Knowledge: 66.9-68.8 Skills: 63.5-65.0	Knowledge: 0.62-0.83 Skills: 0.73-0.88	Knowledge: 7.1-7.5 Skills: 7.9-9.1
May 2019	412	65.8 (271)	34.2 (141)	Knowledge: 66.9-69.4 Skills: 63.5-66.0	Knowledge: 0.65-0.80 Skills: 0.64-0.82	Knowledge: 7.0-7.9 Skills: 7.9-9.6

\* 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. The measurement error here is expressed as a mark out of 160 for Knowledge and out of 200 for Skills.

## 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 perioperative 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 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.

### **2018/19 DO-HNS Examination Review of Activity**

During 2018/19 the Part 2 OSCE was held in England in October 2018, Edinburgh in February 2019 and England in June 2019.

The DO-HNS examination continues to review its processes. However, with the review of the DO-HNS exam taking place in 2018/19, no major initiatives or changes have been introduced to the exam over the preceding year.

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 2019, where new questions were written and the existing question bank was reviewed to establish the impact of the proposed changes to the DO-HNS exam from the DO-HNS Review Panel. 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 final DO-HNS Review Panel meeting took place in October 2018 and the group made the following recommendations as to the future of the DO-HNS exam:

- The DO-HNS Part 1 will be phased out.
- An MRCS ENT Syllabus will be created.
- An MRCS ENT OSCE assessment blueprint has been created. The syllabus contains a number of technical and procedural skills. The blueprint accommodates two specific skills at any one exam. This will be monitored by the Co-chairs and expanded if required.
- The format of the MRCS ENT will match that of the MRCS Part B closely, which will reflect the equivalency of the two exams and allow for sharing of questions, examiners, training and procedures.
- The change in the format of the scenarios will allow borderline regression analysis for the standard setting.

The proposed changes are being submitted for consideration at the September 2019 GMC CAG meeting.

### 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)
September 2018	22	86.4 (19)	13.6 (3)	75.1	0.81	2.09 (6.24)
January 2019	25	80.0 (20)	20.0 (5)	74.4	0.92	2.12 (6.48)
April 2019	25	76.0 (19)	24.0 (6)	72.4	0.94	2.18 (6.56)

\* 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)
October 2018	127	76.38 (97)	23.62 (30)	Day 1: 67.3	Day 1: 0.74	Day 1: 2.47 (13.61)
				Day 2: 67.3	Day 2: 0.84	Day 2: 2.31 (12.72)

February 2019	77	74.03 (57)	25.97 (20)	Day 1: 67.8	Day 1: 0.74	Day 1: 2.48 (13.66)
				Day 2: 68.7	Day 2: 0.79	Day 2: 2.49 (13.68)
June 2019	80	82.50 (66)	17.50 (14)	Day 1: 67.8	Day 1: 0.80	Day 1: 2.41 (13.26)
				Day 2: 67.3	Day 2: 0.75	Day 2: 2.36 (12.99)

\* 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 utility 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 that it considers to need 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 into 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 into the utility and deliverability is required and ongoing.

The Annual meeting of ICBSE MRCS Assessors took place at the Royal College of Surgeons of England on the 5<sup>th</sup> and 6<sup>th</sup> of November, 2018.

## **2018/19 IQA Review of Activity**

In addition to the examination-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 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 training 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 2019 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. These MRCS Review recommendations were presented to ICBSE for discussion and agreement at the July 2018 committee meeting. The main recommendations the Panel proposed were:

- to reduce the number of physical examination stations from four to three (reducing the number of assessed stations from 18 to 17)
- to incorporate Health Promotion into the ICBSE MRC Syllabus
- to incorporate Patient Safety into both Anatomy and Procedural Skills stations.

The ICBSE committee approved these recommendations, and the MRCS OSCE Review Panel have submitted a GMC CAG submission of these proposed changes, with the decision expected in July 2019.

#### **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 and the Research Fellow has recently successfully obtained his PhD on the MRCS work published and listed below.

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 2019/20 to expand the ICBSE research activity as outlined above.

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

1. Oeppen RS, Davidson M, Scrimgeour DS, Rahimi S, Brennan PA. Human factors awareness and recognition during multidisciplinary team meetings. *J Oral Pathol Med.* 2019 Mar 25. doi: 10.1111/jop.12853. [Epub ahead of print] Review. PubMed PMID: 30908725.

2. Scrimgeour D, Patel R, Patel N, Cleland J, Lee AJ, McKinley AJ, Smith F, Griffiths G, Brennan PA. The effects of human factor related issues on assessors during the recruitment process for general and vascular surgery in the UK. *Ann R Coll Surg Engl.* 2019 Apr; 101(4):231-234.
3. Scrimgeour D, Brennan PA, Griffiths G, Lee AJ, Smith F, Cleland J. Does the Intercollegiate Membership of the Royal College of Surgeons (MRCS) examination predict 'on-the-job' performance during UK higher specialty surgical training? *Ann R Coll Surg Engl.* 2018 Oct 5:1-7.
4. Scrimgeour DSG, Cleland J, Lee AJ, Griffiths G, McKinley AJ, Marx C, Brennan PA. Impact of performance in a mandatory postgraduate surgical examination on selection into specialty training. *BJS Open.* 2017 Aug 29;1(3):67-74.
5. Scrimgeour DSG, Cleland J, Lee AJ, Brennan PA. Factors predicting success in the Intercollegiate Membership of the Royal College of Surgeons (MRCS) examination: a summary for OMFS. *Br J Oral Maxillofac Surg.* 2018 Sep;56(7):567-570.
6. 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 Jul;100 (6): 424-427.
7. 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 Oct;16 (5): 292-296.
8. 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.* 2018 Aug;16(4):220-226.
9. Brennan PA, Scrimgeour DS, Patel S, Patel R, Griffiths G, Croke DT, Smith L, Arnett R. Changing Objective Structured Clinical Examinations Stations at Lunchtime During All Day Postgraduate Surgery Examinations Improves Examiner Morale and Stress. *J Surg Educ.* 2017 Jul - Aug;74 (4): 736-747.

Professor Frank CT Smith, ICBSE Chair  
 Gregory Ayre, ICBSE Manager  
 3 July 2019

**PROTECTED CHARACTERISTICS: EXAMINERS/ASSESSORS AND CANDIDATES AT 19 JUNE 2019***Candidate statistics: candidates in 2019 for each stage or type of exam***AGE PROFILE - EXAMINERS/ASSESSORS**

	Edin	England	Glasgow	Ireland	TOTAL	%
20-29	0	<5	0	0	<b>&lt;5</b>	0.1%
30-39	0	5	0	8	<b>13</b>	1.0%
40-49	85	68	34	46	<b>233</b>	18.6%
50-59	230	169	79	73	<b>551</b>	44.1%
60-69	96	97	32	34	<b>259</b>	20.7%
70+	14	29	5	8	<b>56</b>	4.5%
Unspecified	27	46	28	36	<b>137</b>	11.0%
<b>Total</b>	<b>452</b>	<b>414</b>	<b>178</b>	<b>205</b>	<b>1250</b>	

**AGE PROFILE - CANDIDATES**

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
20-29	841	1796	110	470	<b>3217</b>	50.6%
30-39	774	1433	114	477	<b>2798</b>	44.0%
40-49	88	144	13	40	<b>285</b>	4.5%
50-59	10	24	<5	8	<b>46</b>	0.7%
60-69	<5	<5	0	0	<b>5</b>	0.0%
70+	0	1	0	0	<b>1</b>	0.0%
Unspecified	0	0	0	0	<b>0</b>	0.0%
<b>Total</b>	<b>1713</b>	<b>3400</b>	<b>237</b>	<b>995</b>	<b>6352</b>	

**GENDER PROFILE - EXAMINERS/ASSESSORS**

	Edin	England	Glasgow	Ireland	TOTAL	%
Female	57	71	25	41	<b>194</b>	15.5%
Male	390	343	153	164	<b>1050</b>	84.0%
Prefer not to say	5	<5	<5	<5	<b>6</b>	0.5%
<b>Total</b>	<b>452</b>	<b>415</b>	<b>178</b>	<b>205</b>	<b>1250</b>	

**GENDER PROFILE - CANDIDATES**

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Female	486	1005	67	242	<b>1800</b>	28.3%
Male	1136	2385	165	752	<b>4438</b>	69.9%
Prefer not to say	34	6	0	0	<b>40</b>	0.6%
Transgender	<5	6	<5	<5	<b>5</b>	0.1%
Unspecified	58	<5	9	0	<b>69</b>	1.1%
<b>Total</b>	<b>1714</b>	<b>3402</b>	<b>241</b>	<b>995</b>	<b>6352</b>	

**MARITAL STATUS PROFILE - EXAMINERS/ASSESSORS**

	Edin.	England	Glasgow	Ireland	TOTAL	%
Civil Partnership	0	0	0	0	<b>0</b>	0.0%
Cohabiting	<5	<5	<5	<5	<b>7</b>	0.6%
Married	202	72	53	65	<b>392</b>	31.4%
Prefer not to say	<5	<5	5	<5	<b>12</b>	1.0%
Separated/Divorced	9	<5	<5	<5	<b>19</b>	1.5%

**MARITAL STATUS PROFILE - CANDIDATES**

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Civil Partnership	12	5	<5	0	<b>18</b>	0.3%
Cohabiting	36	153	11	<5	<b>202</b>	3.2%
Married	444	933	86	33	<b>1496</b>	23.6%
Prefer not to say	216	150	8	6	<b>380</b>	6.0%
Separated/Divorced	11	18	0	0	<b>29</b>	0.5%



Single	14	8	<5	8	<b>31</b>	2.5%
Unspecified	221	327	114	125	<b>787</b>	63.0%
Widowed	<5	<5	<5	<5	<5	0.1%
<b>Total</b>	<b>452</b>	<b>415</b>	<b>178</b>	<b>205</b>	<b>1250</b>	

Single	839	1709	114	36	<b>2698</b>	42.5%
Unspecified	157	432	21	918	<b>1528</b>	24.1%
Widowed	<5	<5	<5	<5	<5	0.0%
<b>Total</b>	<b>1715</b>	<b>3400</b>	<b>241</b>	<b>995</b>	<b>6352</b>	

**SEXUAL ORIENTATION PROFILE - EXAMINERS/ASSESSORS**

	Edin.	England	Glasgow	Ireland	TOTAL	%
Bisexual	<5	<5	<5	<5	<b>8</b>	0.6%
Heterosexual	302	175	91	131	<b>699</b>	55.9%
Homosexual	<5	<5	<5	<5	<5	0.1%
Prefer not to say	9	7	6	5	<b>27</b>	2.2%
Unspecified	139	230	79	65	<b>513</b>	41.0%
<b>Total</b>	<b>452</b>	<b>415</b>	<b>178</b>	<b>205</b>	<b>1250</b>	

**SEXUAL ORIENTATION PROFILE - CANDIDATES**

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Bisexual	15	26	<5	<5	<b>44</b>	0.7%
Heterosexual	1199	2584	196	80	<b>4059</b>	63.9%
Homosexual	<5	45	<5	<5	<b>47</b>	0.7%
Prefer not to say	448	312	26	18	<b>804</b>	12.7%
Unspecified	53	433	16	896	<b>1398</b>	22.0%
<b>Total</b>	<b>1716</b>	<b>3400</b>	<b>241</b>	<b>995</b>	<b>6352</b>	

**RELIGIOUS PROFILE - EXAMINERS/ASSESSORS**

	Edin.	England	Glasgow	Ireland	TOTAL	%
Buddhist	16	<5	<5	8	<b>27</b>	2.2%
Christian	118	56	26	52	<b>252</b>	20.2%
Hindu	72	26	31	23	<b>152</b>	12.2%
Jewish	<5	<5	<5	<5	<5	0.2%
Muslim	46	49	19	41	<b>155</b>	12.4%
No religion	33	13	5	9	<b>60</b>	4.8%
Other	5	<5	7	<5	<b>18</b>	1.4%
Prefer not to say	6	<5	5	5	<b>20</b>	1.6%
Sikh	<5	5	<5	<5	<b>15</b>	1.2%
Unspecified	150	255	82	60	<b>547</b>	43.8%
<b>Total</b>	<b>452</b>	<b>415</b>	<b>178</b>	<b>205</b>	<b>1250</b>	

**RELIGIOUS PROFILE - CANDIDATES**

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Buddhist	112	50	0	7	<b>169</b>	2.7%
Christian	264	625	46	11	<b>946</b>	14.9%
Hindu	320	461	67	9	<b>857</b>	13.5%
Jewish	<5	14	<5	<5	<b>14</b>	0.2%
Muslim	558	1026	59	55	<b>1698</b>	26.7%
No religion	71	462	35	7	<b>575</b>	9.1%
Other	54	62	<5	<5	<b>123</b>	1.9%
Prefer not to say	284	234	15	8	<b>541</b>	8.5%
Sikh	8	26	<5	<5	<b>35</b>	0.6%
Unspecified	45	440	14	895	<b>1394</b>	21.9%
<b>Total</b>	<b>1716</b>	<b>3400</b>	<b>241</b>	<b>995</b>	<b>6352</b>	

**DISABILITY PROFILE - EXAMINERS/ASSESSORS**

	Edin.	England	Glasgow	Ireland	TOTAL	%
No	391	197	98	147	<b>833</b>	66.6%

**DISABILITY PROFILE - CANDIDATES**

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
No	1663	3058	207	144	<b>5072</b>	79.8%

Partial Unspecified	<5	<5	<5	<5	<5	0.3%
Yes	57	213	78	56	<b>404</b>	32.3%
Total	<b>452</b>	<b>415</b>	<b>178</b>	<b>205</b>	<b>1250</b>	0.7%

Partial Unspecified	19	57	5	<5	<b>81</b>	1.3%
Yes	19	238	25	851	<b>1133</b>	17.8%
Total	<b>1716</b>	<b>3400</b>	<b>237</b>	<b>995</b>	<b>6352</b>	1.0%

**ETHNICITY - EXAMINERS AND ASSESSORS**

<u>With GMC/IMC Number</u>	Edin .	Englan d	Glasgo w	Irelan d	TOTA L	%
Asian or Asian British	112	54	59	25	<b>250</b>	30.2%
Black / African / Caribbean / Black British	9	<5	<5	<5	<b>15</b>	1.8%
Mixed / Multiple Ethnic Groups	26	9	<5	5	<b>43</b>	5.2%
Other Ethnic Group	18	15	<5	6	<b>40</b>	4.8%
Prefer not to say	<5	<5	<5	<5	<b>5</b>	0.6%
Unspecified	51	117	44	29	<b>241</b>	29.1%
White	108	53	38	34	<b>233</b>	28.2%
<b>Total</b>	<b>325</b>	<b>258</b>	<b>145</b>	<b>100</b>	<b>827</b>	100.0 %

**ETHNICITY - CANDIDATES (calendar year 2019)**

<u>With GMC/IMC Number</u>	Edinburg h	Englan d	Glasgo w	Irelan d	TOTA L	%
Asian or Asian British	104	475	21	11	<b>611</b>	25.4%
Black / African / Caribbean / Black British	19	100	5	<5	<b>125</b>	5.2%
Mixed / Multiple Ethnic Groups	23	167	11	0	<b>201</b>	8.3%
Other Ethnic Group	27	116	<5	<5	<b>145</b>	6.0%
Prefer not to say	72	77	<5	<5	<b>154</b>	6.4%
Unspecified	13	170	<5	16	<b>203</b>	8.4%
White	188	717	56	8	<b>969</b>	40.2%
<b>Total</b>	<b>446</b>	<b>1822</b>	<b>102</b>	<b>38</b>	<b>2408</b>	100.0 %

<u>No GMC/IMC Number</u>	Edin .	Englan d	Glasgo w	Irelan d	TOTA L	%
Asian or Asian British	40	22	6	25	<b>93</b>	22.0%
Black / African / Caribbean / Black Br.	<5	<5	<5	<5	<b>8</b>	1.9%
Mixed / Multiple Ethnic Groups	19	<5	0	15	<b>38</b>	9.0%
Other Ethnic Group	8	29	<5	14	<b>54</b>	12.8%

<u>No GMC/IMC Number</u>	Edinburg h	Englan d	Glasgo w	Irelan d	TOTA L	%
Asian or Asian British	613	609	85	31	<b>1338</b>	33.9%
Black / African / Caribbean / Black Br.	32	69	<5	<5	<b>108</b>	2.7%
Mixed / Multiple Ethnic Groups	54	72	<5	10	<b>140</b>	3.5%
Other Ethnic Group	107	509	28	23	<b>667</b>	16.9%

Prefer not to say	<5	<5	<5	<5	<5	0.2%
Unspecified	31	76	10	28	<b>145</b>	34.3%
White	24	30	12	18	<b>84</b>	19.9%
<b>Total</b>	<b>115</b>	<b>164</b>	<b>31</b>	<b>95</b>	<b>423</b>	100.0%

Prefer not to say	285	38	<5	12	<b>339</b>	8.6%
Unspecified	147	258	8	876	<b>1289</b>	32.7%
White	32	23	6	<5	<b>63</b>	1.6%
<b>Total</b>	<b>1270</b>	<b>1578</b>	<b>139</b>	<b>957</b>	<b>3944</b>	100.0%

<u>All Examiners/Assessors</u>	Edin .	Englan d	Glasgo w	Irelan d	TOTA L	%
Asian or Asian British	152	76	65	50	<b>343</b>	27.4%
Black / African / Caribbean / Black Br.	13	<5	<5	<5	<b>23</b>	1.8%
Mixed / Multiple Ethnic Groups	45	13	<5	20	<b>81</b>	6.5%
Other Ethnic Group	26	44	<5	20	<b>94</b>	7.5%
Prefer not to say	<5	<5	<5	<5	<b>6</b>	0.5%
Unspecified	82	193	54	57	<b>386</b>	30.9%
White	132	83	50	52	<b>317</b>	25.4%
<b>Total</b>	<b>440</b>	<b>422</b>	<b>176</b>	<b>195</b>	<b>1250</b>	100.0%

<u>All Candidates</u>	Edinburg h	Englan d	Glasgo w	Irelan d	TOTA L	%
Asian or Asian British	717	1084	106	42	<b>1949</b>	30.7%
Black / African / Caribbean / Black Br.	51	169	9	<5	<b>233</b>	3.7%
Mixed / Multiple Ethnic Groups	77	239	15	10	<b>341</b>	5.4%
Other Ethnic Group	134	625	29	24	<b>812</b>	12.8%
Prefer not to say	357	115	8	13	<b>493</b>	7.8%
Unspecified	160	428	12	892	<b>1492</b>	23.5%
White	220	740	62	10	<b>1032</b>	16.2%
<b>Total</b>	<b>1716</b>	<b>3400</b>	<b>241</b>	<b>995</b>	<b>6352</b>	100.0%