

Intercollegiate Committee for Basic Surgical Examinations

2019/20 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 2020

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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

1. Introduction

This is the **thirteenth** Annual Report of the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) and covers the period August 2019 to July 2020.

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 and commenced in November 2015 for an 18-month period. He published a number of peer-reviewed papers on behalf of ICBSE, gaining a PhD. The second Fellow was appointed in 2019 and is due to take up post during 2020. He has already commenced work to expand the research portfolio.

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/>

During 2019/20 ICBSE has remained in close contact with JCST, CSTAC and ISCP. A new curriculum has been developed which is due to be introduced in 2021. A joint working group will ensure that the MRCS syllabus continues to map to the new curriculum.

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.

2019/20 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. More recently, the GMC agreed in January 2020 for medico-legal issues to be removed from the Applied Basic Sciences paper, and for the exam blueprint to be rearranged to make up for the removal of these questions. This change will be implemented from the January 2021 exam diet.

One of the main work streams of the MCQ Sub Group over the past few years 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. An Angoff standard setting meeting for the Part A MCQ examination was undertaken in 2019 culminating in a minor increase in the percentage pass mark.

The April 2020 diet of the MRCS Part A, along with most other activities, was postponed due to the COVID-19 outbreak. The MCQ sub group agreed in June 2020 that the possibility of delivering the exam remotely should be investigated for its long-term implication. Separately, ICBSE established a Remote Delivery Working Group to investigate how best to ensure that the exam is resilient and can be delivered in September 2020, focussing on remote delivery on a temporary platform to ensure that the September 2020 exam can take place regardless of the status of COVID-19 public health advice.

The GMC are introducing a streamlined approval process for Colleges to apply to make temporary changes to their exams. The changes will be time-limited, and any Colleges that wish to make the changes permanent will have to make a separate, full submission through the usual process.

As such, the ICBSE Remote Delivery Working Group are proposing to the ICBSE committee meeting in July 2020 that the MRCS Part A should be delivered using a remote delivery platform in September 2020 to ensure the exam's resilience against potential restrictions due to the COVID-19 pandemic. If this is agreed, it is intended that ICBSE will seek approval from JSCM before making a submission to the GMC to bring in these changes in time for the September 2020 exam.

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 2019	2920	36.3 (1060)	63.7 (1860)	71.3	0.96	7.37
January 2020	2689	36.1 (972)	63.9 (1717)	72.1	0.96	7.26
April 2020	0	N/A	N/A	N/A	N/A	N/A

* 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 and approved 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 changes to the exam will be implemented from the October 2020 exam diet.

2019/20 Part B (OSCE) Review of Activity

Activity relating to the MRCS Part B (OSCE) during 2019/20 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. Current work is being undertaken to review the potential feasibility of working with 3-D digital imaging of anatomical specimens for use in the Part B Anatomy OSCE stations.

- 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 were 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. This was approved by the GMC.

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 2019	445	63.6 (283)	36.4 (162)	Knowledge: 67.3-95.1 Skills: 67.3-87.0	Knowledge: 0.55-0.78 Skills: 0.63-0.83	Knowledge: 7.0-7.9 Skills: 9.0-9.4
February 2020	452	73.0 (330)	27.0 (122)	Knowledge: 72.0-90.8 Skills: 81.0-94.0	Knowledge: 0.65-0.73 Skills: 0.66-0.83	Knowledge: 7.2-8.0 Skills: 8.8-9.2
May 2020	0	N/A	N/A	N/A	N/A	N/A

* 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.

Review of the MRCS Part B (OSCE) Exam

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 in 2017/18 was 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 submitted a GMC CAG submission of these proposed changes, with the changes approved and originally due to be implemented in October 2020.

As has been noted elsewhere, the May 2020 diet of the MRCS Part B OSCE, along with most other activities, was postponed due to the COVID-19 outbreak. It was therefore decided that the exam needed to be reviewed to ensure that it could be delivered in October 2020.

The GMC are introducing a streamlined approval process for Colleges to apply to make temporary changes to their exams. The changes will be time-limited, and any Colleges that wish to make the changes permanent will have to make a separate, full submission through the usual process.

ICBSE established a Remote Delivery Working Group to investigate how best to ensure that the exam is resilient and can be delivered in October 2020. The group are proposing the following, for discussion and agreement at the ICBSE committee meeting in July 2020:

- Deliver the amended circuit (detailed below) socially-distanced in person in the first instance, or to deliver remotely if it is deemed that circumstances will not permit delivery in person. A decision as to which mode of delivery would be used would be made at a time between the closing date for the exam (17 July) and when details for the exam are sent to candidates (early August).
- Reduce number of procedural skills stations from 2 to 1
- Reduce number of history taking stations from 2 to 1
- Reduce number of anatomy stations from 3 to 2
- Reduce number of pathology stations from 2 to 1
- Reduce overall number of stations from 17 to 13
- Reframe physical examination stations to allow to be delivered without a patient/actor present by focusing on identification/discussion of signs/symptoms of described patients, followed by discussion of likely diagnoses, further investigations and management plan

- Reframe procedural skills stations to allow to be delivered without an actor present and remotely if necessary
- Introduction of a single pass mark rather than separate pass marks for knowledge and skills

If this is agreed, it is intended that ICBSE will seek approval from JSCM before making a submission to the GMC to bring in these changes in time for the October 2020 exam.

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. During the 2018/19 Review of the DO-HNS examinations the decision was taken to cease delivery of the DO-HNS Part 1 examination due to low candidate numbers, and its existence, in effect, as an anomaly within the examinations system. Candidates will in future sit the MRCS Part A

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.

2019/20 DO-HNS Examination Review of Activity

During 2019/20, the Part 2 OSCE was held in Edinburgh in October 2019 and Dublin in March 2020. Due to COVID-19, the exam was not held in June 2020.

The DO-HNS examination continues to review its processes. However, no major initiatives or changes have been introduced to the exam over the preceding year.

The DO-HNS Sub Group continue to monitor and develop the Part 1 and Part 2 question banks. The sub group were due to hold their two-day annual review meeting in March 2020, but this was postponed due to the COVID-19 pandemic. 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 proposed changes from the DO-HNS review were submitted for consideration at the September 2019 GMC CAG meeting. The proposed changes were not approved as there were queries about the place of the MRCS ENT and DO-HNS exam within a future pluripotent core surgical training pathway. Following further discussions with the GMC in February 2020, it was agreed that any discussions on changes to the format, and the future, of the DO-HNS Part 2 exam should be put on hold while the future shape of a pluripotent core training syllabus is decided.

It has been decided, though, that the DO-HNS Part 1 exam will be discontinued after three further diets of the exam. It is therefore planned that the last diet of the DO-HNS Part 1 will be in April 2021.

As has been noted above, the June 2020 diet of the DO-HNS Part 2 OSCE, along with most other activities, was postponed due to the COVID-19 outbreak. It was therefore decided that the exam needed to be reviewed to ensure that it could be delivered in October 2020.

The GMC are introducing a streamlined approval process for Colleges to apply to make temporary changes to their exams. The changes will be time-limited, and any Colleges that wish to make the changes permanent will have to make a separate, full submission through the usual process.

The DO-HNS sub group and the ICBSE Remote Delivery Working Group reviewed the exam and are proposing the following, for discussion and agreement at the ICBSE committee meeting in July 2020:

- The written stations should be delivered online regardless of whether the clinical stations are delivered remotely or in person.
- The nasendoscopy station should be removed from the temporary circuit.
- Ear examination stations should be adapted to allow them to be delivered without the need for a patient.
- As such, the exam will be split into two parts: the written stations will be delivered remotely as a written exam using the same questions. The clinical stations would be delivered in a shortened six- or seven-station circuit (four examined stations and two or three prep stations). The marks would be combined to a single pass mark, as at present.
- The potential for the exam to be delivered at all four colleges should be investigated in order that candidates would not have to travel so far for the exam in the current circumstances. If the exam were delivered at all four Colleges, some Colleges' candidates would need to take the exam at a different College.

If this is agreed, it is intended that ICBSE will seek approval from JSCM before making a submission to the GMC to bring in these changes in time for the October 2020 exam.

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 2019	35	82.9 (29)	17.1 (6)	72.3	0.92	2.17 (6.37)
January 2020	33	75.8 (25)	24.2 (8)	74.7	0.82	2.09 (6.28)
April 2020	0	N/A	N/A	N/A	N/A	N/A

* 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 2019	94	73.4 (69)	26.6 (25)	Day 1: 67.1	Day 1: 0.80	Day 1: 2.53 (13.89)

				Day 2: 66.2	Day 2: 0.89	Day 2: 2.57 (14.14)
March 2020	75	65.3 (49)	34.7 (26)	Day 1: 66.7	Day 1: 0.73	Day 1: 2.53 (13.89)
				Day 2: 67.5	Day 2: 0.88	Day 2: 2.36 (12.96)
May 2020	0	N/A	N/A	Day 1: N/A	Day 1: N/A	Day 1: N/A
				Day 2: N/A	Day 2: N/A	Day 2: N/A

* 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. During 2019, IQA has also devised and introduced a risk register for the MRCS examination.

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.

Seven new assessors were appointed and trained during 2019, including the first international assessor, to help maintain international examinations parity. The Annual meeting of ICBSE MRCS Assessors took place at the Royal College of Surgeons of England on the 11th and 12th of November, 2019.

2019/20 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 2020 is included in Appendix 1 below.

6.4 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 was 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
1 July 2020

PROTECTED CHARACTERISTICS: EXAMINERS/ASSESSORS AND CANDIDATES AT 18 August 2020*Candidate statistics: candidates in 2019 for each stage or type of exam**Examiners: actual at 18 August 2020***AGE PROFILE -****EXAMINERS/ASSESSORS**

	Edin	England	Glasgow	Ireland	TOTAL	%
20-29	0	<5	0	0	<5	0.1%
30-39	0	5	0	7	13	1.0%
40-49	77	58	27	52	214	16.3%
50-59	232	163	83	80	558	42.4%
60-69	131	115	35	37	318	24.2%
70+	17	33	10	12	72	5.5%
Unspecified	29	46	29	36	139	10.6%
Total	486	421	184	224	1315	

AGE PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
20-29	1160	2253	135	592	4140	40.8%
30-39	1544	2686	211	874	5315	52.4%
40-49	187	305	24	66	582	5.7%
50-59	19	49	7	14	89	0.9%
60-69	<5	6	0	0	9	0.0%
70+	0	<5	0	0	<5	0.0%
Unspecified	0	0	0	0	0	0.0%
Total	2913	5300	377	1546	10136	

GENDER PROFILE - EXAMINERS/ASSESSORS

	Edin	England	Glasgow	Ireland	TOTAL	%
Female	60	72	27	44	193	16.4%
Male	421	348	157	180	1106	84.1%
Prefer not to say	<5	<5	<5	<5	<5	0.2%
Transgender	<5	<5	<5	<5	<5	0.2%
Total	486	421	184	224	1315	

GENDER PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Female	840	1494	98	386	2818	27.8%
Male	1960	3789	259	1156	7164	70.7%
Prefer not to say	53	9	<5	<5	66	0.7%
Transgender	<5	<5	<5	<5	9	0.1%
Unspecified	55	<5	19	<5	79	0.8%
Total	2913	5300	377	995	10136	

**MARITAL STATUS PROFILE -
EXAMINERS/ASSESSORS**

	Edin.	England	Glasgow	Ireland	TOTAL	%
Civil Partnership	0	0	0	0	0	0.0%
Cohabiting	<5	<5	<5	<5	7	0.5%
Married	221	83	56	82	442	33.6%
Prefer not to say	<5	<5	5	<5	12	0.9%
Separated/Divorced	10	<5	<5	<5	21	1.6%
Single	15	9	<5	8	33	2.5%
Unspecified	234	321	116	127	798	60.7%
Widowed	<5	<5	<5	<5	<5	0.2%
Total	486	421	184	224	1315	

MARITAL STATUS PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Civil Partnership	18	8	<5	0	27	0.3%
Cohabiting	50	221	19	<5	292	2.9%
Married	752	1576	134	63	2525	24.9%
Prefer not to say	346	218	20	13	597	5.9%
Separated/Divorced	17	36	0	<5	54	0.5%
Single	1460	2657	174	76	4367	43.1%
Unspecified	269	583	29	1391	2272	22.4%
Widowed	<5	<5	0	0	<5	0.0%
Total	2913	5300	377	1546	10136	

SEXUAL ORIENTATION PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
Bisexual	<5	<5	<5	<5	8	0.6%
Heterosexual	329	180	96	148	753	57.3%
Homosexual	<5	<5	<5	<5	<5	0.2%
Prefer not to say	9	7	6	6	28	2.1%
Unspecified	146	231	80	66	523	39.8%
Total	486	421	184	224	1315	

SEXUAL ORIENTATION PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Bisexual	27	52	7	<5	87	0.9%
Heterosexual	2047	4097	303	140	6587	65.0%
Homosexual	<5	72	0	<5	75	0.7%
Prefer not to say	751	477	45	36	1309	12.9%
Unspecified	86	602	22	1368	2078	20.5%
Total	2913	5300	377	1546	10136	

RELIGIOUS PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
Buddhist	17	<5	<5	8	28	2.1%
Christian	126	60	29	58	273	20.8%
Hindu	83	27	32	24	166	12.6%
Jewish	<5	<5	<5	<5	<5	0.2%
Muslim	50	56	20	50	176	13.4%
No religion	34	11	5	9	59	4.5%
Other	5	<5	7	<5	18	1.4%
Prefer not to say	7	<5	5	5	21	1.6%
Sikh	<5	5	<5	<5	15	1.1%
Unspecified	158	251	83	63	555	42.2%
Total	486	421	184	224	1315	

RELIGIOUS PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Buddhist	250	84	0	13	347	3.4%
Christian	430	938	66	21	1455	14.4%
Hindu	500	727	98	18	1343	13.2%
Jewish	<5	22	0	0	24	0.2%
Muslim	966	1769	112	106	2953	29.1%
No religion	115	680	53	11	859	8.5%
Other	96	96	6	<5	202	2.0%
Prefer not to say	472	340	25	16	853	8.4%
Sikh	13	37	<5	0	52	0.5%
Unspecified	69	607	15	1357	2048	20.2%
Total	2913	5300	377	1546	10136	

DISABILITY PROFILE - EXAMINERS/ASSESSORS

	Edin.	England	Glasgow	Ireland	TOTAL	%
No	424	201	103	163	891	67.8%
Partial	<5	<5	<5	<5	<5	0.3%
Unspecified	58	215	79	59	411	31.3%
Yes	<5	<5	<5	<5	9	0.7%
Total	486	421	184	2324	1315	

DISABILITY PROFILE - CANDIDATES

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
No	2834	4829	337	254	8254	81.4%
Partial	30	86	7	<5	125	1.2%
Unspecified	25	321	29	1290	1665	16.4%
Yes	24	64	<5	0	92	0.9%
Total	2913	5300	377	1546	10136	

ETHNICITY - EXAMINERS AND ASSESSORS

<u>With GMC/IMC Number</u>	Edin.	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	123	56	61	27	267	30.8%
Black / African / Caribbean / Black British	9	<5	<5	<5	16	1.8%
Mixed / Multiple Ethnic Groups	27	9	<5	6	45	5.2%
Other Ethnic Group	19	17	<5	9	46	5.3%
Prefer not to say	<5	<5	<5	<5	5	0.6%
Unspecified	53	117	45	30	245	28.3%
White	112	53	40	38	243	28.0%
Total	345	255	152	115	867	100.0 %

<u>No GMC/IMC Number</u>	Edin.	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	47	24	6	26	103	23.0%
Black / African / Caribbean / Black Br.	6	<5	<5	<5	11	2.5%
Mixed / Multiple Ethnic Groups	20	<5	0	15	39	8.7%
Other Ethnic Group	9	29	<5	17	58	12.9%
Prefer not to say	0	<5	0	0	<5	0.2%
Unspecified	32	77	10	29	148	33.0%
White	27	29	13	19	88	19.6%
Total	141	166	32	109	448	100.0 %

ETHNICITY - CANDIDATES (calendar year 2019)

<u>With GMC/IMC Number</u>	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	180	722	28	15	945	29.2%
Black / African / Caribbean / Black British	27	159	9	<5	125	3.9%
Mixed / Multiple Ethnic Groups	36	243	13	0	292	9.0%
Other Ethnic Group	45	211	5	<5	145	4.5%
Prefer not to say	120	118	8	<5	154	4.8%
Unspecified	17	218	<5	30	203	6.3%
White	290	986	90	11	1377	42.5%
Total	715	2657	156	63	3241	100.0 %

<u>No GMC/IMC Number</u>	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	1080	1000	138	52	2270	34.7%
Black / African / Caribbean / Black Br.	56	112	7	6	181	2.8%
Mixed / Multiple Ethnic Groups	116	141	<5	23	284	4.3%
Other Ethnic Group	205	944	49	49	1247	19.1%
Prefer not to say	453	56	7	25	541	8.3%
Unspecified	248	359	12	1325	1944	29.7%
White	40	31	<5	<5	78	1.2%
Total	2198	2643	139	957	6545	100.0 %

<u>All Examiners/Assessors</u>	Edin.	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	170	80	67	53	370	28.1%
Black / African / Caribbean / Black Br.	15	4	<5	6	27	2.1%
Mixed / Multiple Ethnic Groups	47	13	<5	21	84	6.4%
Other Ethnic Group	28	46	<5	26	104	7.9%
Prefer not to say	<5	2	<5	<5	6	0.5%
Unspecified	85	194	55	59	393	29.9%
White	139	82	53	57	331	25.2%
Total	486	421	184	224	1315	100.0 %

All Candidates

	Edinburgh	England	Glasgow	Ireland	TOTAL	%
Asian or Asian British	1260	1722	166	67	3215	31.7%
Black / African / Caribbean / Black Br.	83	271	16	7	377	3.7%
Mixed / Multiple Ethnic Groups	152	384	17	23	576	5.7%
Other Ethnic Group	250	1155	54	52	1511	14.9%
Prefer not to say	573	174	15	28	790	7.8%
Unspecified	265	577	15	1355	2212	21.8%
White	330	1017	94	14	1455	14.4%
Total	2913	5300	377	1546	10136	100.0 %