



**The Membership Examination of the Surgical Royal
Colleges of Great Britain**

MRCS

2007/8 ANNUAL REPORT

July 2008

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This Annual Report has been prepared by the Internal Quality Assurance Committee (IQA) on behalf of the Intercollegiate Committee for Basic Surgical Examinations. IQA would welcome comments from stakeholders on the usefulness of this first Annual Report and ways in which the Report can be improved in future years. If you have comments on this Report please send them to: The Chairman, IQA, c/o ICBSE Co-ordinator, The Royal College of Surgeons of England, 35-43 Lincoln Inn's Fields London, WC2 3PE.

1. The purpose of the Annual Report

This is the first Annual Report on the Membership Examination of the Surgical Royal Colleges of Great Britain. It covers the period August 2007 to July 2008.

The purpose of the Annual Report is to provide a definitive source of information about the examination for all interested stakeholders including candidates, trainers, Assigned Education Supervisors and the public. In addition to providing summary statistical data about the MRCS examinations held during the period it provides a report on the quality assurance of the examination.

During the year covered by this Report the MRCS examination has undergone significant revision to make it appropriate for the new curriculum and the pattern of surgical training introduced in the United Kingdom (UK) from August 2007. A number of transitional arrangements for the MRCS were put in place during this period and are detailed on the intercollegiate MRCS website www.intercollegiatemrcs.org.uk. As a consequence of these revisions and transitional arrangements the statistical information provided in this first Annual Report is limited to the outcomes of the Part A of the MRCS introduced for first examination in September 2007 - the component of the MRCS that will continue unchanged into August 2008 and beyond.

2. The MRCS examination

The Membership Examination of the Surgical Royal Colleges of Great Britain (MRCS) is designed for candidates in the generality part of their specialty training, whether in run-through programmes or not. It is a crucial milestone which must be achieved if trainees are to progress to specialty surgical training as defined by the nine 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. The design, content, standard and quality assurance of the MRCS examination is the responsibility of the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) which has a number of specialist sub groups each responsible for a different aspect of the examination.

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

- Paper 1 - Applied Basic Science
- Paper 2 - Principles of Surgery-in-General

The marks for both papers are combined to give a total mark for Part A. The examination syllabus, and the format and content of the Part-A examination are common to all three colleges.

With effect from August 2008 the MRCS examination will have two parts: Part A (written paper) and Part B (OSCE). The Part A examination will be as described above except that to achieve a pass the candidate will be 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. The Part B (OSCE), to be introduced for first examination in September 2008, 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.

For new candidates, the Part B (OSCE) will replace the Structured Interview, Clinical and Communications Skills components of the MRCS examination. For more information about the Part B (OSCE) to be introduced from August 2008, and the implications for candidates part way through the examination, go to www.intercollegiatemrcs.org.uk

The results of the first OSCE diets will be reported in the next Annual Report.

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>. Nine surgical specialties: cardiothoracic surgery; general surgery; neurosurgery; oral & maxillofacial surgery; otolaryngology; paediatric surgery; plastic surgery; urology; and trauma & orthopaedic surgery have collaborated 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, have been approved by the Post Graduate Medical Education Training Board (PMETB).

4. Part A written papers

4.1 Preparing the 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. During the year workshops for question writers were held to produce new questions according to the agreed specification and, following editing and specialist review, were 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 question paper sub group of the ICBSE.

4.2. Standard setting

Questions are carefully planned from the outset to be at an appropriate level of difficulty. The standard for the paper is set using a modification of the Angoff procedure where a group of 'judges' estimates 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 judges include practising surgeons, trainers, a trainee and a patient representative. A number of 'marker' questions taken from a previous examination are included in each Part A paper and are used to calibrate the standard and help to ensure that there is continuity between the standard of the examination over time.

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

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.

5. The Quality Assurance and the role of IQA

The quality of the MRCS examination is monitored by the ICBSE's Intercollegiate Internal Quality Assurance Committee (IQA). The IQA meets at least three times each year and receives, for each part of the examination, the following information:

- overall pass rates and descriptive statistics for the latest diet and previous diets;
- pass/fail breakdown by candidates' first language for the latest diet and previous diets;

- pass/fail breakdown by candidates' gender for the latest diet and previous diets;
- pass/fail breakdown by candidates' primary medical qualification for the latest diet and previous diets;
- pass/fail breakdown by candidates' ethnicity for the latest diet and previous diets.

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 makes regular reports and recommendations to the ICBSE which has overall responsibility for the MRCS examination.

6. Summary descriptive statistics: Part A

	Total number sat	Passing % (and number)	Failing % (and number)	Pass mark %	Measure of reliability*	Measurement error** %
September 2007	102	65.7% (67)	34.3% (35)	67	0.93	2.41
January 2008	563	65.4% (368)	34.6% (195)	66	0.93	2.39
April 2008	422	62.8% (265)	37.2% (157)	66	0.93	2.50

* An expression of the consistency and reproducibility (precision) of the examination. The measure used here is KR-20. For examinations, a reliability measure above 0.80 is widely held to be the minimum acceptable value, but higher values are often demanded of medical examinations.

**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.