

# Multi-Specialty Recruitment Assessment (MSRA) – Test Blueprint & Information

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## 1. Structure of the Multi-Specialty Recruitment Assessment

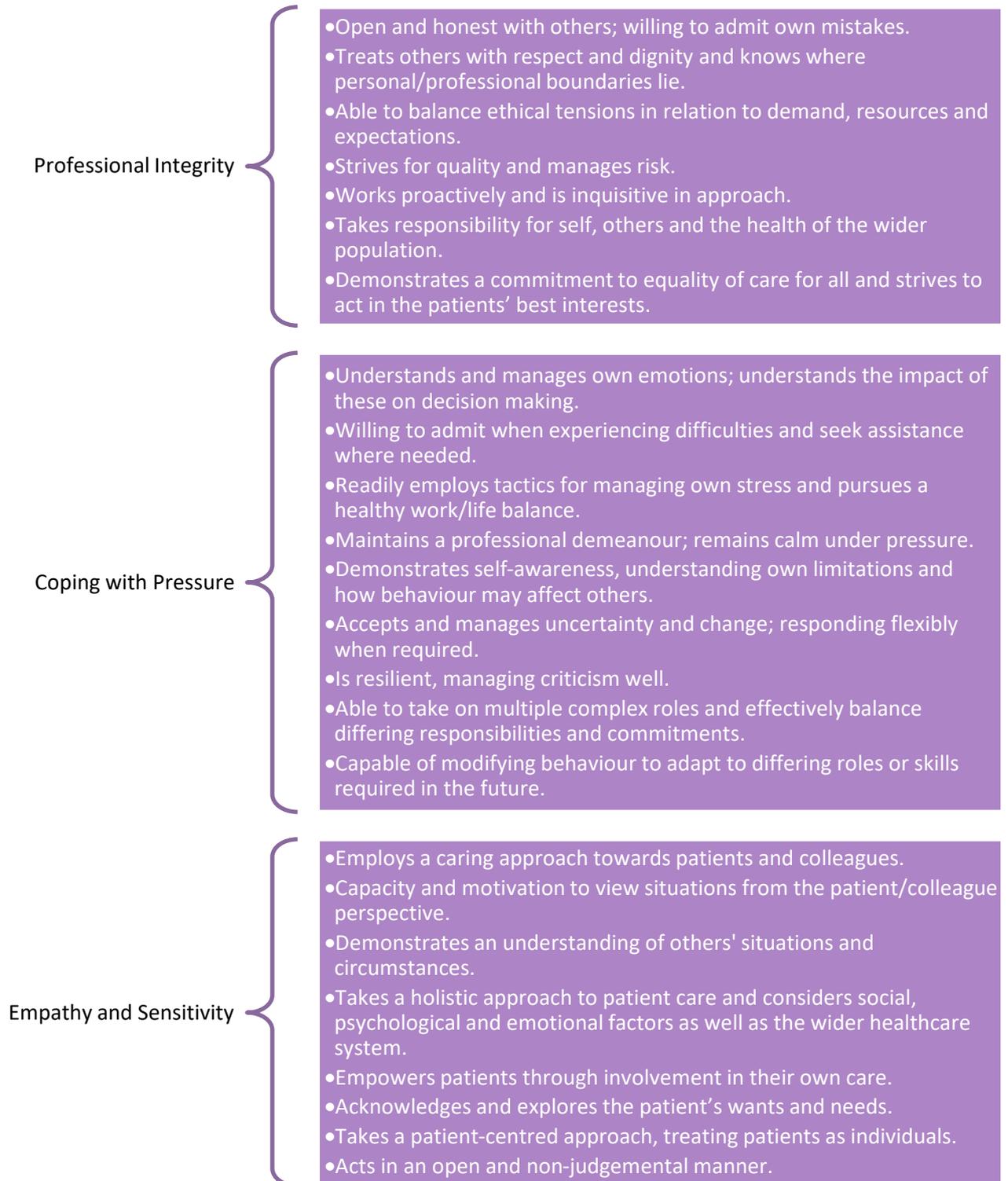
- 1.1. The Multi-Specialty Recruitment Assessment (MSRA) is a computer-based assessment which is currently used by a number of specialties for entry into post-graduate medical training; General Practice, Psychiatry (Core and CAMHS), Radiology, Ophthalmology, Obstetrics and Gynaecology, Community and Sexual Reproductive Health, and Neurosurgery. There are two parts to the MSRA; a Professional Dilemmas (PD) paper, followed by a Clinical Problem Solving (CPS) paper.
- 1.2. Both parts of the MSRA are designed to **assess those with a foundation level of competence**. The PD paper provides scenarios in the workplace for applicants to demonstrate their judgement about the most appropriate behaviours in that context. The PD content directly relates to the Generic Professional Capabilities framework outlined by the GMC which are required capabilities of all doctors. The CPS is a test of how candidates can apply their clinical knowledge to make clinical decisions and is based on the Foundation Programme curriculum. **Therefore, the MSRA is relevant and fair for doctors applying for any medical specialty**. For more information about why and how the MSRA is used for the specialty to which you are applying, please refer to the specialty recruitment website.
- 1.3. **Professional Dilemmas (PD)**
  - 1.3.1. The PD paper is a Situational Judgement Test (SJT). This part of the assessment focuses on a candidate's approach to working as a doctor. Specifically, the paper measures one's understanding of situations that arise for doctors in the NHS (during a Foundation Placement) and judgement in choosing more or less appropriate responses to that situation, based on an understanding of what is more or less important. It focuses on appropriate behaviours when interacting with patients and colleagues and in managing one's work. It does not require specific knowledge of experience in specialty training but does assume general familiarity with typical primary/secondary care work.
  - 1.3.2. The test covers three core domains:
    - Professional integrity
    - Coping with pressure
    - Empathy and sensitivity
  - 1.3.3. The PD paper consists of 50 items and there are 95 minutes in which to complete the test. Only 42 items account towards the final score, as 8 of the items in each test paper are being tested ('piloted') before use.
- 1.4. **Clinical Problem Solving (CPS)**
  - 1.4.1. In the CPS part of the assessment, candidates are presented with clinical scenarios that require them to exercise judgement and problem solving skills to determine appropriate diagnosis and management of patients. This is not a test of knowledge per se, but rather one's ability to apply it appropriately. The items are based on Foundation-level clinical practice, and test higher level knowledge synthesis of medical knowledge.
  - 1.4.2. The CPS paper consists of 97 questions and there are 75 minutes in which to complete the test. Only 86 items account towards the final score, as 11 of the items in each test paper are being tested ('piloted') before use.

## 2. Professional Dilemmas Paper

- 2.1. The PD paper is a Situational Judgement Test (SJT). An SJT is an assessment method which measures how a candidate believes they should behave when posed with a challenging professional dilemma. It is not a test of knowledge of problem-solving ability, but rather aims to assess professional attributes (i.e. domains/competencies; see 0) which are considered to be important for successful progression through training and performance in one's job role. There is no negative marking used.
- 2.2. As of 2020, the PD paper has been shortened slightly, from 58 to 50 question. This has been done to improve the candidate experience by reducing the number of questions to read and length of the paper and MSRA overall. The time allowed to complete the PD paper has been shortened accordingly. This decision was made based on modelling work which showed the current high levels of reliability could be maintained with a shorter test that used the best quality items.
- 2.3. **Context/Setting**
  - 2.3.1. As the PD test is a measure of aptitude for entry to specialty training, it is set within the context of the Foundation Programme, with the candidate assuming the role of an F2 doctor. Although the candidate is asked to assume the role of a F2 doctor, each scenario is reviewed by Subject Matter Experts (SMEs) to ensure that the scenario does not contain any knowledge of procedures or policies that would only be applicable in certain localities or that are very UK-specific, as this would disadvantage certain candidates (i.e. International Medical Graduates).
  - 2.3.2. In order to ensure that the PD paper is relevant to candidates applying to any specialty, and to increase the overall face validity of the test, the blueprint also requires that items are based within a range of contexts and rotations that a Foundation Doctor would realistically find themselves in. Therefore, there is a mixture of items based in hospital settings (across a variety of wards/placements), general practice, out-of-hours clinics, as well as a few based outside of a medical context (where relevant).
  - 2.3.3. Even where a setting is specified in the question, this has only been chosen to provide a context, but the judgement required to answer the question is not specific to that setting.

## 2.4. Target Domains

2.4.1. The PD test covers three core competencies. Behavioural indicators linked to each competency are outlined below:



## 2.5. Item Types / Formats

2.5.1. There are 50 scenarios in the PD paper. Around half of the questions are 'rank options in order' and the other half are 'multiple choice'. There is no negative marking, so you should attempt to answer all questions.

- 2.5.2. Responses to scenarios are usually actions taken to address the situation. Response options will be realistic and the ‘best response’ will always be included. For scenarios where the candidate is asked to consider the appropriateness of actions (whether ranking or multiple choice), there will be a mixture of good, acceptable and poor responses to the situation, as judged by SMEs. Completely implausible responses are not included as options.
- 2.5.3. **Part 1 – Ranking:** Candidates are asked to judge the appropriateness of four or five independent actions, i.e. ‘*Rank in order the following actions in response to this situation (1= Most appropriate; 5= Least appropriate)*’. These scenarios require the candidate to think about the appropriateness of each of the different options presented. **For these scenarios the actions are discrete actions and should not be thought of as chronological.** An example is presented below:

You are a Foundation (F2) doctor working on a busy orthopaedic ward. During an evening shift one of the nurses asks to speak to you in confidence. She is concerned about one of your F2 colleagues, James. The nurse tells you that she has observed James making several mistakes today and when she told him this he burst into tears and said he couldn’t cope with his workload.

*Rank in order the following actions in response to this situation (1=Most appropriate; 5= Least appropriate).*

- A. Discuss distribution of workload with the junior medical team
- B. Speak to James about the nurse’s concerns
- C. Suggest the nurse advises James to make an appointment with occupational health as soon as possible
- D. Suggest that the nurse contacts your consultant to discuss her concerns about James
- E. Seek advice from your seniors as to how to support James

- 2.5.4. **Part 2 – Multiple Choice:** Candidates are asked to select three most appropriate actions to take in combination, out of a total of eight plausible actions, i.e. ‘*Select the THREE most appropriate actions to take in this situation*’. These scenarios require the candidate to think about the appropriateness of each of the options presented. **The three most appropriate actions taken together should fully resolve the situation.** An example is presented below:

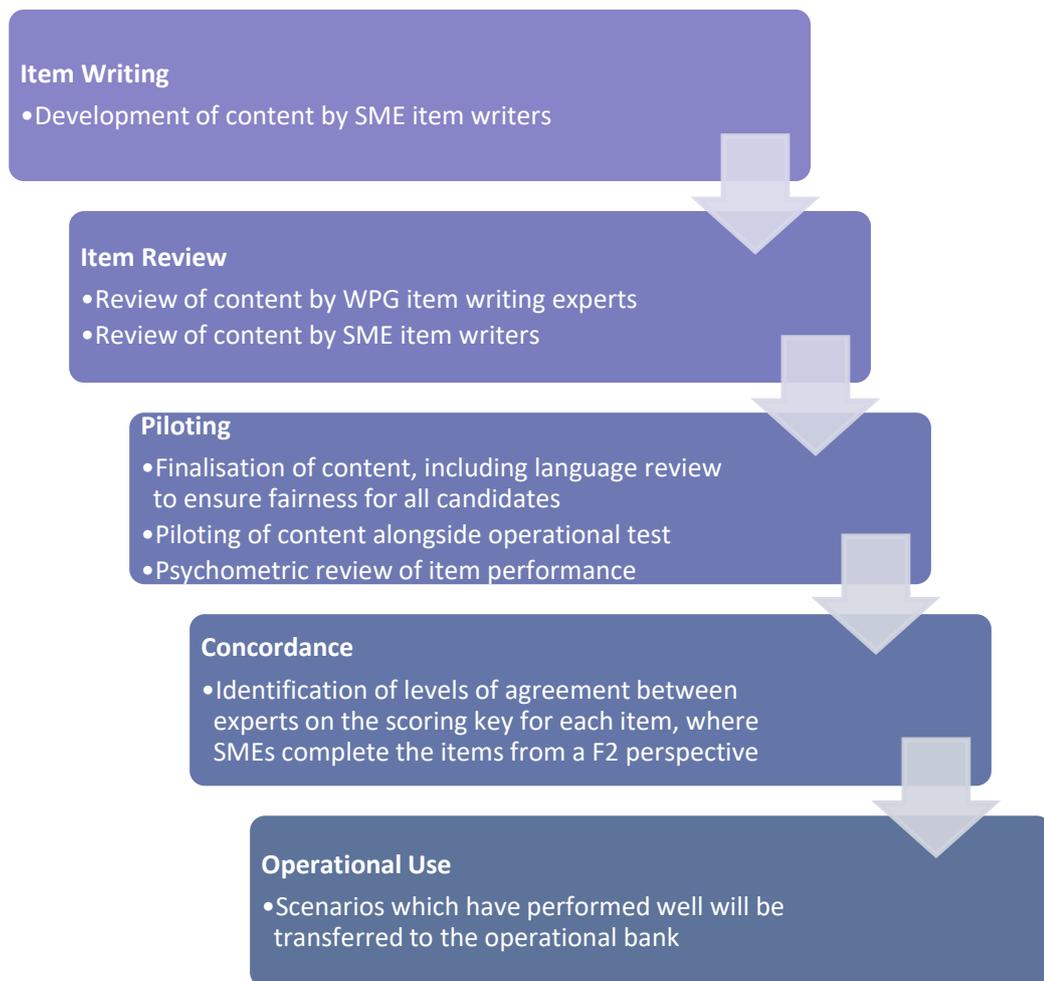
You are a Foundation (F2) doctor working in urology. You have just led a teaching session with the medical students. You had prepared a presentation especially for the session. Your consultant tells you that the feedback from the medical students was poor.

*Choose the THREE most appropriate actions to take in this situation.*

- A. Ask for feedback from your F2 colleagues on your teaching skills.
- B. Ask the consultant for more detailed feedback.
- C. Arrange training on presentation skills from the hospital IT department.
- D. Ask an F2 colleague to help you practice your next teaching session.
- E. Do more reading on the subject in preparation next time.
- F. Ask your consultant to observe you in your next teaching session.
- G. Include this experience as a reflective entry in your Foundation portfolio\*.
- H. Discuss this experience with your educational supervisor.

## 2.6. Item Development

- 2.6.1. A well-established team of trained item writers, including representation from each of the specialties that use the MSRA in their selection processes, develop new content year on year. Some of this content is then piloted alongside the tests used live. As new specialties join the MSRA, they are invited to participate and engage with the process in order to enhance the overall validity of the test and to ensure that content is relevant for all applicants. The development process is summarised below:



## 2.7. Scoring Process

- 2.7.1. PD scenarios are scored against pre-determined keys that have been determined throughout the development process. This means the scoring of the test is standardised and fair to all candidates.
- 2.7.2. **Scoring Ranking Scenarios:** The items in the ranking section (Part 1) require candidates to rank a series of options in response to a given situation. Answers are marked by comparing a candidate's response to the pre-determined key. The closer a candidate's response is to the pre-determined key, the more marks are awarded. A candidate does not need to get every option in exactly the same order as the pre-determined key to obtain a good score on an SJT item. **Given that there is no negative marking, and the way the scoring convention works, it is strongly recommended that all questions are attempted.**
- 2.7.3. **Scoring Multiple Choice Scenarios:** The items in the multiple choice section (Part 2) require candidates to select three response options from a minimum of eight possible responses,

which together are the most appropriate response to the given situation. As with ranking items, answers are marked by comparing a candidate's response to the pre-determined key. **Again, there is no negative marking therefore it is recommended that all questions are attempted.**

### 3. Clinical Problem Solving Paper

3.1. The Clinical Problem Solving (CPS) paper is an assessment which measures the candidate's ability to apply their clinical knowledge in and make clinical decisions in everyday practice. The scenarios are based on Foundation-level clinical practice, and are testing a candidate's ability to synthesise and apply medical knowledge (not just their recall of knowledge).

#### 3.2. Context/Setting

3.2.1. CPS items are based in 12 clinical topic areas relevant to general medicine and each test paper includes a balance of scenarios which cover all 12 topics. The topics covered include:

Cardiovascular	Dermatology / ENT / Eyes	Endocrinology / Metabolic	Gastroenterology / Nutrition
Infectious disease / Haematology / Immunology / Allergies / Genetics	Musculoskeletal	Paediatrics	Pharmacology & Therapeutics
Psychiatry / Neurology	Renal/Urology	Reproductive	Respiratory

3.2.1. Scenarios are all relevant to the Foundation (FY2) training programme. Where a setting is specified in the question, this has only been chosen to provide a context; but the judgement required to answer the question is not specific to that setting.

#### 3.3. Target Domains

3.3.1. The test covers five core domains / competencies. The competencies and their definitions are provided below:

- 1) **Investigation:** *specific investigations that are carried out in order to obtain a more conclusive diagnosis, or rule out possible causes of illness/injury*
- 2) **Diagnosis:** *identification of a condition, disease or injury made by evaluating the symptoms and signs presented by a patient*
- 3) **Emergency:** *potential serious illness requiring an immediate response (recognising patient risk based on suggested factors)*
- 4) **Prescribing:** *advising, authorising or reviewing the use of medicine/drugs as part of a patient's clinical management plan*

- 5) **Management (non-Prescribing):** *advising, authorising or reviewing the use of other forms/methods of treatment (not medicinal/drug-related) as part of a patient's clinical management plan*

### 3.4. Item Types / Formats

3.4.1. There are 86 items in the CPS paper. Around half of the items are Extended Matching Questions (EMQ) and the other half are Single Best Answers (SBA). EMQs refer to multiple clinical scenarios that are linked to the same set of response options.

3.4.2. **Extended Matching Question (EMQ):** Candidates are presented with a list of 7-10 plausible response options and multiple, separate questions linked to this response set. Candidates will need to select the most appropriate or likely answer for each clinical presentation, i.e. *'For each patient, please select the most appropriate drug to prescribe.'* Each response option can be selected once, more than once or not at all when responding to the set of cases. An example is presented below.

***Tremor and tingling***

- |    |                 |    |                    |
|----|-----------------|----|--------------------|
| A. | Acromegaly      | E. | Hypoadrenalism     |
| B. | Diabetes        | F. | Hypoparathyroidism |
| C. | Hyperthyroidism | G. | Hypopituitarism    |
| D. | Hypothyroidism  |    |                    |

*For each patient, what is the **SINGLE** most likely diagnosis?*

*Select **ONE** option only from the list above. Each option may be selected once, more than once, or not at all.*

1. A 58 year old woman develops a tremor, and has repeated episodes of breathlessness associated with tachycardia.
2. A 44 year old woman develops tingling in her fingers 3 days after a total thyroidectomy for papillary carcinoma of the thyroid.

3.4.3. **Single Best Answer (SBA):** Candidates are asked to select the single most appropriate or likely answer out of 5- 8 plausible responses for one clinical presentation, i.e. *'Select the **SINGLE** most appropriate diagnosis from the list below'*. An example is below.

A 17 year old student suddenly develops chest pain and dyspnoea after a morning swim. His trachea is deviated to the left. There is hyper-resonance and decreased breath sounds on that side.

*Select the **SINGLE** most likely **diagnosis** from the list below. Select **ONE** option only.*

- A. Asthma
- B. Left ventricular failure
- C. Pneumothorax
- D. Pulmonary Embolus
- E. Pulmonary haemorrhage

### 3.5. Item Development

- 3.5.1. A well-established team of trained item writers, who are also clinicians, have responsibility for developing new items year on year. Some of these are then piloted alongside the operational tests. This is the same team that produces the PD items.
- 3.5.2. All new CPS items undergo a thorough review process that includes a review by a nominated clinician, and further review and refinement by the team of SME item writers. At each stage, items are reviewed for fairness and relevance. Reviews also take place to ensure that each item is appropriate for all candidates in terms of language used (items undergo an English Not First Language review) and that locality-specific knowledge is not tested. This ensures that the CPS is fair to all candidates.
- 3.5.3. Once items are piloted, they are reviewed again by a statistician to establish their psychometric performance, and undergo a further review from the SMEs. Consideration is given to how the best performing candidates answered the items, how candidates responded to each of the distractors (i.e. incorrect response options), the item's correlation with live test performance, the item's level of difficulty and ability to differentiate candidates' performance, and whether it appears to be favouring any particular demographic groups (i.e. differential item functioning). Following satisfactory performance, successful CPS items can enter the operational item bank.

### 3.6. Scoring Process

- 3.6.1. For each item, 1 mark is awarded for choosing the correct response. There is no negative marking.

## 4. Candidate Tips

- 4.1. A generic tutorial is available to allow you to familiarise yourself with the controls and screen layouts in advance – see Pearson VUE or Oriel for details.
- 4.2. A glossary of frequently used terms and a list of abbreviations is available for reference throughout the exam. This is particularly useful for those less familiar with the UK medical system.
- 4.3. Papers are NOT negatively marked so **make sure you answer all the questions**. A wrong answer can score more marks than a missed question.
- 4.4. Read the instructions and questions carefully. There may be times when you would like more information to answer questions; you need to give your best answer using the information provided in the question.
- 4.5. For the SJT it is important to bear in mind that answers are marked against a predetermined key, based on a near-miss approach. Your performance on the test as a whole will be used to determine your level of situational judgement.
- 4.6. Read the example questions provided carefully. If you feel you would benefit from revisiting some areas of knowledge or practice in order to be better able to show your capability, then you should do this before the assessment.