



# MRCPI in Paediatrics Examination Content Outline

## **The MRCPI in Paediatrics Examination Content Blueprint**

This document outlines the content of the RCPI membership examination in Paediatrics. The topics, mode of examination and distributions of content contained in this blueprint have been defined through collaborative review and approved by the MRCPI Paediatric examinations boards. The blueprint is based on the RCPI Basic Specialist Training in Paediatrics Curriculum. The subject matter experts involved in the examination blueprint process are a diverse working group of Paediatric consultants from across the country. All contributors are members or fellows of the Faculty of Paediatrics and are listed on the Specialist Register for Paediatrics. The Content blueprint will be reviewed and validated every 3 years unless there is a significant change in practice during this time.

### **Examination Aim**

The MRCPI examination aims to ascertain that a candidate has met the prescribed standard of Paediatric knowledge gained through basic specialist training and defined by the curriculum set by BST. This level of knowledge should provide the candidate with the clinical expertise required of a Paediatric registrar in the Irish hospital workplace. The examination format and development process meet best practice standards for fairness, reliability and validity.

Reasons to attain the MRCPI:

1. This is a requirement as part of Basic Specialist Training
2. The MRCPI or equivalent is an application requirement to entry into Higher Specialist Training.
3. Attaining the examination will enable Membership of the Royal College of Physicians of Ireland

### **Purpose and use of Content Blueprint**

A content outline for the examination is provided for standardisation, fairness and transparency. This provides consistency for targeted question writing, as a template to select examination papers, to guide standard setting and to inform documentation that will be published for trainees and other exam stakeholders.

### **Examination Format**

- The Membership examination in Paediatrics consists of two examinations taken at different stages of basic specialist training.
- Part I examination: This is a written examination which consists of 100 Single Best Answer Questions (1 paper, 3 hours)
- Part II examination: There are two elements to this examination.
  - Part II Written: This is a written examination which consists of two papers, each with 60 Single Best Answer Questions conducted over 2 hours. Both papers are taken on the same day.
  - Part II Clinical: The clinical examination will consist of 6 stations each of 12 minutes duration. This is undertaken once the Part II written is successfully completed.
- The Part I and Part II Written Examinations will be conducted via computer based testing at sites determined by the examinations department.

## Expected clinical knowledge

*Note: This section describes expected knowledge, not examination regulations or eligibility*

- **Part I Written Examination** [SBA paper]. The questions in this paper test basic knowledge expected with clinical exposure in General Paediatrics at SHO level in Ireland. Successful candidates will demonstrate a broad knowledge of the basic physiology and physical findings of a neonate, child or adolescent. The candidate will also have basic knowledge of clinical literature published in paediatrics, public health related to paediatrics and the fundamentals of managing common paediatric conditions.
- The Part I is a check point to identify those who need to gain more basic clinical knowledge of paediatric medicine before advancing to study for the Part II Examination.
- **Part II Written examination** [SBA paper]. The questions in this paper test advanced knowledge, problem solving and management of emergency situations in General Paediatrics with an increased focus on specialist areas.
- It is expected that potential Part II Written candidates will gain a further 6 – 12 months clinical experience after successful completion of the Part I written examination.
- The aim of the written examinations is to sample the broad breadth of knowledge that would be expected of a doctor starting in a general paediatrics registrar post
- **Part II Clinical Examination.** It is expected that candidates taking the clinical examination will have a minimum of 12 months but ideally 15 months of experience in paediatric practice and will proficiently perform physical examinations to the level required of a registrar. Clinical judgement, management skills and communication are also assessed.

## Skills: The focus of examination questions

Skills describe the nature of the questions that may appear on the examination, so the type of information the question authors will focus on.

This may be a useful way to organise your study notes.

### Application of Scientific Knowledge

#### Initial assessment

- The diagnostic significance of patterns of symptoms
- The pathophysiology of commonly presenting physical signs in infants, children and adolescents

#### Investigations

- Selection and order of investigations based on a child's needs and overall well being
- The risks associated with choice of investigation

#### Treatment and management of disease

- Compliance strategies and objective setting for patients and parents
- The pharmacology and pharmacodynamics of common treatment options
- The risk factors, and potential complications, associated with common treatments

Disease prevention and health education: Risk factors, preventive measures, and health strategies

## Topics Covered in the MRCPI in Paediatrics

The MRCPI examination covers questions and cases across the age range from neonates to adolescence, examining acute and chronic care under the following topics.

| Clinical Topic                   | Part I<br>Written | Part II<br>Written | Part II<br>Clinical |
|----------------------------------|-------------------|--------------------|---------------------|
| Allergy and immunology           | ✓                 | ✓                  | ✓                   |
| Basic science of genetics        | ✓                 |                    | ✓                   |
| Cardiology                       | ✓                 | ✓                  | ✓                   |
| Child Protection                 | ✓                 | ✓                  | ✓                   |
| Communication                    |                   |                    | ✓                   |
| Complex needs and Rehabilitation | ✓                 | ✓                  | ✓                   |
| Dermatology                      | ✓                 | ✓                  | ✓                   |
| Development and Behaviour        | ✓                 | ✓                  | ✓                   |
| Endocrinology and Growth         | ✓                 | ✓                  | ✓                   |
| ENT                              | ✓                 | ✓                  | ✓                   |
| Epidemiology and Statistic       |                   | ✓                  |                     |
| Ethics and professionalism       |                   | ✓                  | ✓                   |
| Fluids and Nutrition             | ✓                 | ✓                  | ✓                   |
| Gastroenterology and Hepatology  | ✓                 | ✓                  | ✓                   |
| Haematology                      | ✓                 | ✓                  | ✓                   |
| Infectious Diseases              | ✓                 | ✓                  | ✓                   |
| Medical Oncology                 | ✓                 | ✓                  | ✓                   |
| Mental Health                    |                   | ✓                  | ✓                   |
| Metabolic                        | ✓                 | ✓                  | ✓                   |
| Muscular Disorders               | ✓                 | ✓                  | ✓                   |
| Nephrology                       | ✓                 | ✓                  | ✓                   |
| Neurology                        | ✓                 | ✓                  | ✓                   |
| Ophthalmology                    | ✓                 | ✓                  | ✓                   |
| Orthopaedics                     | ✓                 | ✓                  |                     |
| Pharmacology                     | ✓                 | ✓                  | ✓                   |
| Respiratory Medicine             | ✓                 | ✓                  | ✓                   |
| Rheumatology                     | ✓                 | ✓                  | ✓                   |
| Surgery                          | ✓                 | ✓                  |                     |

**MRCPI Part I Written**

|    | <b>Clinical Topic</b>            | <b>% Weighting</b> |
|----|----------------------------------|--------------------|
| 1  | Allergy and immunology           | 2 - 5              |
| 2  | Basic science of genetics        | 2 - 5              |
| 3  | Cardiology                       | 4 - 8              |
| 4  | Child Protection                 | 1 - 3              |
| 5  | Pharmacology                     | 2 - 5              |
| 6  | Dermatology                      | 2 - 5              |
| 7  | Development and Behaviour        | 4 - 8              |
| 8  | Complex needs and Rehabilitation | 1 - 3              |
| 9  | Endocrinology and Growth         | 2 - 5              |
| 10 | ENT                              | 2 - 5              |
| 11 | Gastroenterology/ Hepatology     | 4 - 8              |
| 12 | Haematology                      | 2 - 5              |
| 13 | Infectious Diseases              | 4 - 8              |
| 14 | Medical Oncology                 | 2 - 5              |
| 15 | Metabolic                        | 2 - 5              |
| 16 | Muscular Disorders               | 2 - 5              |
| 17 | Nephrology                       | 4 - 8              |
| 18 | Neurology                        | 2 - 5              |
| 19 | Fluids and Nutrition             | 4 - 8              |
| 20 | Ophthalmology                    | 1 - 3              |
| 21 | Orthopaedics                     | 1 - 3              |
| 22 | Surgery                          | 2 - 5              |
| 23 | Respiratory Medicine             | 4 - 8              |
| 24 | Rheumatology                     | 2 - 5              |

Above are the topics covered in the Part I written examination. The spread of questions covered is weighted to an approximate percentage +/- 1

|   | <b>Areas of Knowledge</b>                          | <b>% Weighting</b> |
|---|----------------------------------------------------|--------------------|
| 1 | Clinically orientated application of basic science | 20                 |
| 2 | Recognising the normal vs. sick child              | 20                 |
| 3 | Recognition and initial management of emergencies  | 20                 |
| 4 | Solving Common Problems                            | 20                 |
| 5 | Diagnosis and the use of diagnostic tests          | 20                 |

## MRCPI Part II Written

|    | Clinical Topic                   | % Weight |
|----|----------------------------------|----------|
| 1  | Allergy and immunology           | 2 – 5    |
| 2  | Cardiology                       | 4 – 8    |
| 3  | Child Protection                 | 2 – 5    |
| 4  | Clinical Pharmacology            | 2 – 5    |
| 5  | Complex needs and Rehabilitation | 4 – 8    |
| 6  | Dermatology                      | 2 – 5    |
| 7  | Development and Behaviour        | 2 – 5    |
| 8  | Endocrinology and Growth         | 4 – 8    |
| 9  | ENT                              | 1 – 3    |
| 10 | Epidemiology and Statistic       | 1 – 3    |
| 11 | Ethics and professionalism       | 1 – 3    |
| 12 | Fluids and Nutrition             | 2 – 5    |
| 13 | Gastroenterology and Hepatology  | 4 – 8    |
| 14 | Haematology                      | 4 – 8    |
| 15 | Infectious Diseases              | 4 – 8    |
| 16 | Medical Oncology                 | 2 – 5    |
| 17 | Mental Health                    | 2 – 5    |
| 18 | Metabolic                        | 2 – 5    |
| 19 | Nephrology                       | 4 – 8    |
| 20 | Neurology And Muscular Disorders | 4 – 8    |
| 21 | Ophthalmology                    | 1 – 3    |
| 22 | Orthopaedics                     | 1 – 3    |
| 23 | Respiratory Medicine             | 4 – 8    |
| 24 | Rheumatology                     | 2 – 5    |
| 25 | Surgery                          | 1 – 3    |

Above are the topics covered in the Part II written examination. The spread of questions covered is weighted to an approximate percentage +/- 1. Each paper is 60 single best answer questions. Both papers will be held over five hours [Paper 1, 2 hours followed by one hour break followed by Paper 2, 2 hours] on the same day.

## Areas of Clinical Knowledge Part II Written

|   | Areas of Knowledge                        | % Weighting |
|---|-------------------------------------------|-------------|
| 1 | Recognition and management of emergencies | 20          |
| 2 | Long term management                      | 15          |
| 3 | Complications of illness and treatment    | 15          |
| 4 | Diagnosis and the use of diagnostic tests | 15          |
| 5 | Neonatal Medicine                         | 15          |
| 6 | Care of the complex patient               | 10          |
| 7 | Adolescent Medicine                       | 10          |

## Part II Clinical Examination

The MRCPI Part II in Paediatrics Clinical examination is the third of three assessments which must be successfully completed to become a member of the Royal College of Physicians of Ireland (MRCPI). It is a clinical examination for post-graduate doctors.

The clinical examination will focus on the ability of the candidate to demonstrate proficiency in the areas of history taking, communication, physical examination, problem solving and basic steps in the assessment and management of the neonate, child or adolescent with acute or chronic disease.

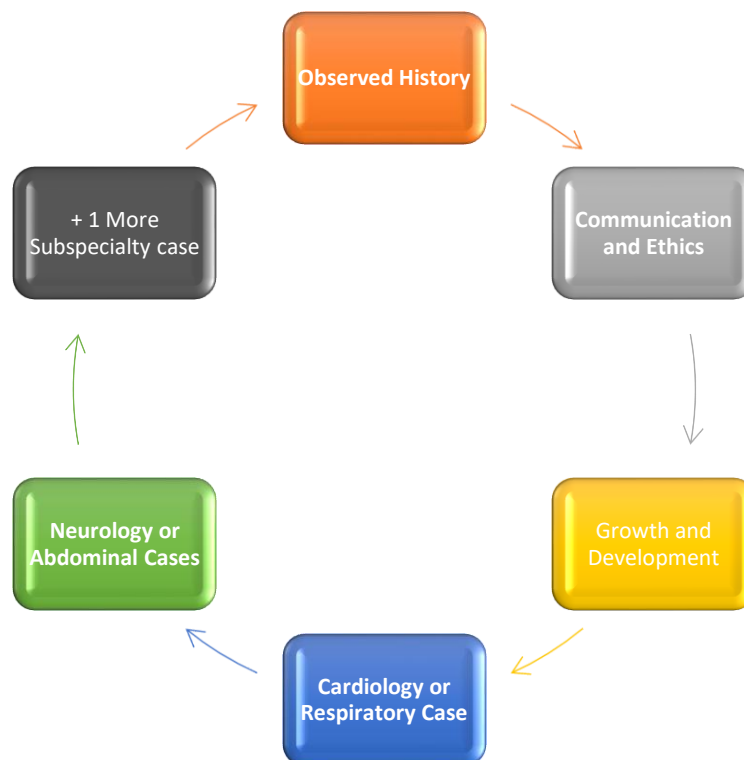
The new clinical structures will comprise of 6 x 12 minute stations

The typical timing **breakdown** for a clinical examination is as follows:

### 12 minutes total:

- 10 minutes in which to perform a focused and directed examination on the patient
- A timing notification will be given after 10 minutes
- Candidates will then have two minutes to summarise and discuss investigations and management
- There will be a timing notification after 12 minutes to state the ending of the case
- Candidates will move to await the next station and rest for two minutes to compose before entering the next clinical case
- During these two minutes the examiner will complete the marksheet and write comments where necessary
- Each case will be examined by one examiner who remains at this station for the duration of the examination.

### Examination Station Circuit:



## Case descriptions

Throughout the examination candidates are assessed on:

- Communication skills,
- Management of the child
- Identifying/recognising normalcy/disability or complex need,
- Ability to recognise the acutely ill child and identify red flags

Candidates will see a range of children of different ages may be asked questions about genetics, epidemiology or pharmacology throughout the examination.

## List of Stations:

### Observed History

Acute real patient

Cases will be patients with common General Paediatrics presentations. At this station the candidate is expected to take a full patient history. The Clinical judgement discussion will focus on the correct presentation of the case history and the candidate's management plan for the patient.

### Communication and Ethics

Simulated scenarios with either parents or actors. These may include ethical dilemmas based on the medical council guidelines. Scenarios may include common paediatric presentations, child protection, or mental health. A sample scenario is available on the RCPI website.

### Growth and Development

Child with or without developmental complexity

At this station a candidate may be asked to assess growth or complete a development assessment. The candidate is expected to exhibit knowledge of normal growth and development and potential concerns. The candidate is expected to understand care over the lifespan including vaccinations, care of common childhood illnesses and nutrition.

Structure: Observed case with questions

## Clinical examination cases

### Cardiology or Respiratory Case

Cardiology: This station will review a candidates ability to perform a cardiology examination and cases can include any common cardiology presentation.

OR

Respiratory: This station can also include an ENT exam. A candidate will perform a respiratory examination and cases can include any common respiratory presentation.

### Neurology or Abdominal Cases

Abdominal: This station will primarily include Gastroenterology and Hepatology. It may also cover fluids and nutrition.

Respiratory: This station will include common neurological presentations, it may also include musculoskeletal cases and can include aspects of ophthalmology.

## Other Subspecialty case

This will assess the application of General Paediatrics Skills in one of the following:

- Allergy
- Dermatology
- Endocrinology
- Haematology
- Immunology
- Infectious diseases
- Metabolic
- Nephrology
- Oncology
- Rheumatology

**Marking Scheme:**

- Each station will be marked by a single examiner. Each examiner will have calibrated the examination with a colleague who is administering the same examination in a different circuit on the same day for consistency.
- The performance of all candidates will be reviewed on the day of the clinical examination.
- Outcomes of the clinical examination will be presented to the Part II examinations board and results released within 3 to 4 weeks after the examination date.

**Rules and Regulations:**

- All Paediatric examinations conform to the Rules and Regulations set down by the Examinations Department of the Royal College of Physicians of Ireland.
- Any candidate unsuccessful in the examination is entitled to request a review of their performance by the Assoc Dean of Examinations and feedback for future attempts.