

# Diploma in Paediatrics

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transcending boundaries  
transforming medical education



**Faculty Overview  
2021**

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## 1. General Information

The Diploma in Paediatrics is an online programme, delivered online by the Royal College of Physicians of Ireland in collaboration with iheed. Based on the latest knowledge and clinical best-practice, the programme provides a highly engaging, richly informative, and convenient educational opportunity for residents / doctors preparing for specialism in paediatrics, family doctors, and others wishing to upskill / refresh their knowledge in this important area. The programme develops the skills and knowledge to manage infants and children with common and important health problems.

The curriculum and content of the programme is overseen by a Programme Board comprising various stakeholders from the RCPI, iheed and independent experts in paediatrics.

Accreditation for the programme is provided by the Royal College of Physicians of Ireland.

**RCPI Programme Director**      Dr. Rosina McGovern  
**iheed Programme Leader**      Dr Charles Shepherd

### Programme Board

The Programme Board is responsible for the academic oversight of the programme. This function is essential to guide the development of the Programme, ensuring that the latest treatment strategies and innovative research are included in the curriculum. The Programme Board is also responsible for quality assurance of education processes for delivery and assessment of students.

## 2. Aims and Objectives

This Programme is designed to complement existing clinical experience whether in primary care or early hospital specialisation, to give doctors a deeper understanding of paediatrics and to place paediatric care in the context of the family and society across the spectrum of health and illness. By the end of the Programme, participants will be able to:

- Develop a comprehensive and structured approach to the medical history and physical examination of a child.
- Demonstrate when referral to paediatric services is needed.
- Recognise symptoms of, and manage, the critically ill child at a level appropriate to your professional role.
- Explain the clinical features and develop a systematic approach to managing acute care and common presentations in paediatrics; including but not limited to:
  - respiratory, infectious diseases, gastroenterology, cardiology, neurology, growth and endocrinology, and dermatology in paediatrics
- Discuss child development and identify abnormal development.
- Identify presentations of child abuse and be able to discuss child safeguarding.
- Explain adolescent medicine and transitional care.
- Understand behavioural paediatrics and child psychiatry in paediatrics.
- Understand how to provide care within multidisciplinary teams to children and their families.
- Explain surgical presentations in children.

*Note: While this programme appeals to a broad range of medical practitioners, it excludes content specific to neonates and areas of specialist hospital based paediatric care.*

### 3. Entry Criteria

The programme is aimed at doctors working in primary care and those in early stages of hospital specialisation. As such, participants should be qualified doctors, registered with their respective professional body and engaging in medical practice for the duration of the programme.

The programme will be conducted online and solely in English. Participants are required to be proficient in English and to have access to a laptop with a microphone, speakers, webcam, and reasonable broadband coverage.

### 4. Programme Content and Structure

The programme is six months in duration and will cover a wide range of topics in paediatrics over 22 learning weeks.

The programme will be provided through a delivery model which blends self-directed learning with tutor-led team-based learning.

Throughout the programme students will engage in:

- Weekly online synchronous tutorials
- Tutor-moderated discussion forums
- Interactive case studies
- Reflective exercises
- Online examinations

Some of the benefits of this approach over traditional classroom-based programmes are:

- Ongoing monitoring of individual student engagement
- Student: tutor interaction
- Accessibility of content at a time and pace that suits each learner
- Frequent individualised feedback points during each programme
- Data analytics to drive programme improvement.
- Highly scalable, secure, and robust delivery

## 4.1. Module Learning Outcomes & Topics

Delivery Schedule	Section	Topic	Learning Outcomes
<b>Block 1</b> Week 1	Introduction to paediatrics	History taking	<ul style="list-style-type: none"> <li>Develop a comprehensive and structured medical history of a child</li> <li>Explain how the age of the child has an impact on obtaining an appropriate medical history, including the use of appropriate wording / open-ended and directed questions</li> <li>Evaluate the impact of the parent as historian in obtaining a medical history on a paediatric patient</li> </ul>
	Introduction to paediatrics	General examination	<ul style="list-style-type: none"> <li>Be able to perform a structured general physical examination of a child</li> </ul>
Week 2	Introduction to paediatrics	Recognising the critically ill child	<ul style="list-style-type: none"> <li>Understand acute presentations in children, including red flag diagnoses and red flag symptoms</li> <li>Have a systematic approach to the evaluation of a child, including appropriate early warning tools and investigations that will assist the practitioner in detecting the deteriorating condition of the child</li> </ul>
	Introduction to paediatrics	Critically ill child - oncological presentations	<ul style="list-style-type: none"> <li>Understand the prevalence and incidence of childhood cancers</li> <li>Recognise the clinical features that may warrant investigation and when to refer</li> <li>Understand the role of different healthcare professionals in cancer care</li> </ul>
Week 3	School going child	Wheeze and Asthma	<ul style="list-style-type: none"> <li>Define asthma</li> <li>Define a management plan for asthma tailored to severity.</li> </ul>
	Infant with respiratory symptoms	Viral respiratory tract infection Pneumonia (typical and atypical)	<ul style="list-style-type: none"> <li>Describe the pathology of viral respiratory tract infection and discuss the links with asthma exacerbations</li> <li>Differentiate between the aetiology of bacterial and viral pneumonia</li> <li>Describe clinical presentation depending on age group</li> <li>Describe the different causative organisms for different age groups and management</li> <li>Identify the challenge in clinical diagnosis of atypical pneumonia and appropriate antibiotic treatment options</li> </ul>
		Cystic Fibrosis	<ul style="list-style-type: none"> <li>Understand the presentations and diagnosis of cystic fibrosis</li> <li>Understand the principles of treatment of cystic fibrosis</li> </ul>

Delivery Schedule	Section	Topic	Learning Outcomes
Week 4	ENT	Otitis Media/mastoiditis	<ul style="list-style-type: none"> <li>• Understand the aetiology of acute otitis media and otitis externa</li> <li>• Recognise acute mastoiditis, including the appropriate management and need for referral</li> </ul>
	Infant with respiratory symptoms	Assessment of Stridor - Epiglottitis, Croup and Tonsillitis	<ul style="list-style-type: none"> <li>• Understand the presentation, pathophysiology and treatment of epiglottitis, croup and tonsillitis</li> <li>• Define severity and identify appropriate management depending on severity</li> <li>• Differentiate between viral and bacterial tonsillitis and appropriate treatment, including the duration of treatment</li> <li>• Identify clinical presentation of peritonsillar abscess</li> <li>• Understand other causes of stridor such as foreign body inhalation/retropharyngeal abscess</li> </ul>
Week 5	Dermatology	Common skin conditions	<ul style="list-style-type: none"> <li>• Identify birthmarks and haemangiomas</li> <li>• Identify nappy rash and differentiate candida from contact dermatitis to initiate appropriate treatment</li> <li>• Identify scabies and management</li> </ul>
	Dermatology	Management of skin infections Eczema	<ul style="list-style-type: none"> <li>• Identify the causal bacteria, features, complications and management of skin infections</li> <li>• Identify the features and management of infected eczema and eczema herpeticum</li> <li>• Advise parents on management of eczema</li> <li>• Identify when eczema herpeticum needs specialist opinion</li> </ul>
Week 6	Community paediatrics	Assessment of Developmental Milestones	<ul style="list-style-type: none"> <li>• State the four areas of development and the normal developmental milestones</li> <li>• Recognise normal variations in development</li> <li>• Identify significant developmental delay</li> </ul>
		Cerebral Palsy	<ul style="list-style-type: none"> <li>• Understand the genesis and presentation of cerebral palsy</li> <li>• Understand the treatment and evaluation of functional disabilities in cerebral palsy and when specialist care is required</li> </ul>

Delivery Schedule	Section	Topic	Learning Outcomes
<b>Block 2</b> Week 7	Infectious Diseases	Immunisation & vaccine preventable disease	<ul style="list-style-type: none"> <li>Understand rationale for immunisation schedules</li> <li>Discuss controversies around some vaccinations and offer relevant advice to parents</li> <li>Identify what to advise in unusual clinical circumstances or when complications arise</li> </ul>
Week 8	Infectious and communicable Diseases	Childhood infections - common (exanthemas, respiratory, gastrointestinal, skin etc) - common worldwide infections (malaria, hepatitis, parasitic, helminths etc)	<ul style="list-style-type: none"> <li>State the causes and presentations of common communicable diseases</li> </ul>
	Infectious diseases	Child with temperature / rash and temperature	<ul style="list-style-type: none"> <li>Recognise features in the clinical presentation or investigation findings that suggest serious illness</li> <li>Recognise the clinical features that may warrant investigation for immunodeficiency</li> <li>Recognise the infectious diseases associated with the presentation of rashes</li> <li>Have a systematic approach to escalation or 'safety-netting' and parent education</li> <li>Recognise important differential diagnoses for the Febrile Child (e.g. Kawasaki disease, Lymphoma)</li> </ul>
Week 9	Paediatric nephrology	Primary nocturnal enuresis	<ul style="list-style-type: none"> <li>Recognise the psychological basis for enuresis, the use of reassurance and motivation therapy and pharmacological management</li> <li>Differentiate between primary and secondary nocturnal enuresis</li> <li>Demonstrate organic causes and the appropriate investigations for them</li> </ul>
Week 9	Paediatric nephrology	Disorders of the urogenital tract, UTI and reflux	<ul style="list-style-type: none"> <li>Assess the significance of urinary tract infection in different age groups, appropriate investigation and treatment</li> <li>Discuss the congenital anomalies that may occur in the urogenital tract, how to diagnose them, and when referral for surgery is appropriate</li> </ul>
Week 10	Community paediatrics	Child protection	<ul style="list-style-type: none"> <li>Explain the duty of all professionals working with children to report concerns about child protection issues to appropriate authorities</li> <li>Be able to examine local policy and demonstrate an understanding of local norms</li> </ul>
	Community paediatrics	Non-accidental injury	<ul style="list-style-type: none"> <li>Identify when an injury may be non-accidental, and assess that injury</li> <li>Identify features that would arouse suspicion of non-accidental injury</li> <li>Identify risk factors for non-accidental injury</li> </ul>
Week 11	Growth and endocrinology	Normal / abnormal growth, measurement and growth charts, obesity	<ul style="list-style-type: none"> <li>Measure growth and development of the child and recognise abnormal growth</li> <li>Illustrate the appropriate growth chart and record accurately</li> <li>Explain the causes of short stature or slow growth and the characteristics of these conditions</li> <li>Calculate mid-parental height and apply it as a guide to expected height</li> <li>Recognise obesity and its consequences, and explain effective strategies to families to manage obesity</li> <li>Measure body mass index (BMI) and explain how to use age appropriate BMI centile charts</li> </ul>

Delivery Schedule	Section	Topic	Learning Outcomes
Week 12	Growth and endocrinology	Feeding Issues	<ul style="list-style-type: none"> <li>• Explain the principles of managing common feeding difficulties</li> <li>• Identify features in the history that may suggest a mechanical reason</li> <li>• Assess links with development to see if feeding age appropriate</li> <li>• Understand children with sensory difficulties and textures</li> </ul>
	Growth and endocrinology	Puberty	<ul style="list-style-type: none"> <li>• Identify normal patterns of puberty and the causes of problems relating to puberty and growth</li> </ul>
Week 13	Developmental paediatrics	Head shape and size, hearing, vision, squint	<ul style="list-style-type: none"> <li>• Under the assessment of hearing and vision at different stages of development</li> <li>• Recognise the characteristics of infants with positional abnormal head shapes / sizes and the potential diagnosis</li> <li>• State the causes of and differentiate between acute onset and congenital squint</li> <li>• Recognise abnormal alignment of the eyes and examine corneal reflexes</li> </ul>
Week 14	General paediatrics	Sleep	<ul style="list-style-type: none"> <li>• Explain the principles of managing common sleep problems</li> <li>• Recognise clinical features that may suggest an underlying pathology</li> </ul>
	General paediatrics	ASD / ADHD	<ul style="list-style-type: none"> <li>• Explain the features of ASD and ADHD and the options for management and referral</li> </ul>

Delivery Schedule	Section	Topic	Learning Outcomes
Block 3 Week 15	Genetics	Genetic Disorders	<ul style="list-style-type: none"> <li>Understand disease inheritance and be able to interpret patterns of inheritance</li> <li>Understand the methodologies of testing for common chromosomal and genetic diseases, when testing is appropriate and have an appreciation of ethical dilemmas that may exist.</li> <li>Identify and know the features of common chromosomal and genetic diseases</li> </ul>
	Non-communicable Disease	Diabetes	<ul style="list-style-type: none"> <li>Identify children and adolescents with Type 1 and Type 2 diabetes according to accepted guidelines</li> <li>Identify appropriate management strategies for Type 1 and Type 2 diabetes in children and adolescents</li> <li>Understand the causes and management of common complications in diabetes in children and adolescents</li> </ul>
Week 16	Gastroenterology	Jaundice in children	<ul style="list-style-type: none"> <li>Identify the appropriate questions to ask in the history</li> <li>Describe the investigations</li> <li>Identify red flag symptoms</li> <li>Identify cause of jaundice in older child, relevant history and exam</li> </ul>
	Gastroenterology	Recurrent abdominal pain	<ul style="list-style-type: none"> <li>Explain the possible biological, psychological and social contributing factors in chronic or recurrent abdominal pain</li> <li>Recognise features in the presentation that suggest the importance of different aetiologies</li> <li>Distinguish which features suggest that reassurance rather than investigation is needed</li> <li>Define appropriate referral to psychology</li> <li>Consider when there may be child protection issues</li> </ul>
	Gastroenterology	Constipation	<ul style="list-style-type: none"> <li>Explain the relevance of predisposing conditions, e.g. hypothyroidism, neuro-disability, psychosocial problems</li> <li>Manage simple constipation with and without soiling</li> <li>Recognise when to liaise with senior paediatricians or with specialist nurses and psychologists</li> </ul>
Week 17	Gastroenterology	Dehydration and rehydration	<ul style="list-style-type: none"> <li>Assess hydration status and manage rehydration safely</li> <li>Identify the reason for fluid deficit</li> <li>Differential diagnosis and appropriate investigations</li> <li>Identify modes of rehydration and differentiate when they should be used</li> </ul>
	Gastroenterology	Diarrhoea	<ul style="list-style-type: none"> <li>Distinguish between acute and chronic diarrhoea (including infectious) and identify the differential for both</li> <li>Recognise clinical features suggestive of inflammatory bowel disease</li> <li>Explain how to assess and diagnose inflammatory bowel diseases and when to refer to a specialist</li> <li>Understand the diagnosis of Coeliac disease</li> </ul>
Week 18	Neurology	Headaches	<ul style="list-style-type: none"> <li>State the possible biological, psychological and social factors that can contribute to headache</li> <li>Recognise when headache may indicate serious illness and arrange prompt investigations</li> <li>Investigate and manage chronic headache in children</li> </ul>
	Neurology	Fits and seizures	<ul style="list-style-type: none"> <li>Form a differential diagnosis for faints and 'funny turns'</li> <li>Recognise the features of fits and seizures in children</li> <li>Identify common non epileptic events, e.g. reflex anoxic seizures, breath holding attacks, self-gratification</li> </ul>
Week 19	Paediatric cardiology	Cardiology red flags in infants, e.g. cyanosis, cardiac murmur, heart failure,	<ul style="list-style-type: none"> <li>Recognise urgent or important cardiac diagnoses in infants</li> </ul>

Delivery Schedule	Section	Topic	Learning Outcomes
Week 20	Paediatric cardiology	Syncope, chest pain, palpitations	<ul style="list-style-type: none"> <li>Differentiate harmless causes of palpitations, syncope and chest pain from those requiring treatment and referral</li> </ul>
	Paediatric cardiology	Rheumatic Heart Disease	<ul style="list-style-type: none"> <li>Identify the clinical features of rheumatic fever, acute management and long term sequelae</li> </ul>
Week 21	Paediatric allergy	Allergies	<ul style="list-style-type: none"> <li>Identify common clinical patterns and sensitising allergens</li> <li>Recognise signs of anaphylaxis and treatment</li> </ul>
	Paediatric allergy	Food allergy	<ul style="list-style-type: none"> <li>Define food allergy</li> <li>Identify clinical patterns of presentation</li> <li>Differentiate between IgE mediated and Non IgE mediated allergy</li> <li>Recognise the need for specialist referral</li> </ul>
Week 22	Community paediatrics	Childhood limp	<ul style="list-style-type: none"> <li>Explain the differential diagnosis of and initial management of limp and pain on walking</li> <li>Explain the clinical features that would be cause for further investigation</li> </ul>
	Surgical presentations in children	Acute abdominal pain	<ul style="list-style-type: none"> <li>Identify causes of acute abdominal pain, presentation and management of appendicitis</li> <li>Recognise presentation of intussusception</li> </ul>
	Surgical presentations in children	The testes	<ul style="list-style-type: none"> <li>Explain the significance of and management of undescended testes</li> <li>Differentiate between undescended and retractile testes</li> <li>Identify other abnormalities</li> <li>Identify clinical presentation of testicular torsion and understand need for emergency management</li> </ul>

## 5. Teaching and Learning Strategy

The approach to teaching and learning adopted for the Paediatrics programme considers a variety of different learner environments and recognises that the participants will be mature learners. It values peer-to-peer learning, the experience from each participant's clinical practice and the sharing of such experiences. Within each topic, the material is presented in a variety of styles, designed to appeal to all types of learners.

### 5.1 Self-directed Problem-Based / Case-Based Learning

Under the guidance of clinical tutors, participants will study online using a combination of practical content and case-based learning. Additional thought-provoking case studies with appropriate reading lists are designed to stimulate reflection of the learning points and how they might be applied to the participant's own practice.

### 5.2 Online Tutorials / Seminars

Tutor-led video conference sessions will be held weekly throughout the programme, focusing on topics introduced in the online material and explored in the Discussion Forum. The online tutorial format will vary and may involve discussion around case studies, videos from Key Opinion Leaders and multidisciplinary meetings. These will be facilitated through the online learning environment.

### 5.3 Discussion Forums

Participants' knowledge and skills will be enhanced through their contribution to the online discussion forum under the guidance of a group tutor. These discussions are designed to provide a clinical context to help participants apply acquired knowledge and to keep them engaged and motivated throughout the programme.

## 6. Assessment Strategy

As an introductory knowledge-based programme, the focus of assessment will be to ensure acquisition of knowledge and the ability to form differential diagnoses as set out in the learning outcomes.

To successfully complete the programme, participants will be required to successfully complete an online examination at the end of week 6, week 14 and week 22 and demonstrate practical acquisition of key skills through the submission of a skills portfolio.

Each examination will comprise Multiple Choice and Key Feature Problem questions and represent even coverage of all modules. Questions will be drawn from an extensive pre-approved question bank and randomised for each student, ensuring comparable assessment of topics between students. The examination will be conducted online and supervised by iheed through their remote proctoring solution to ensure appropriate rigour and security procedures are in place to maintain the integrity of the examination process.

To ensure consistency between delivery and assessment, exam processes will be reviewed to the Steering Committee's satisfaction to ensure:

- learning objectives are clear and specific, are aligned with teaching activities and the examination question.
- candidates receive detailed instructions and guidelines for the examination.
- candidates receive a comprehensive marking guide.
- there is consistency in grading and among groups / cohorts.
- questions have high discrimination scores.
- appropriate feedback is provided to students in a timely fashion.

## Passing Requirements

The passing requirement for each assessment is 50% and no compensation between assessments is allowed.

Students are permitted two attempts at each assessment which consist of a main and repeat attempt.

Students who do not successfully complete an assessment within the permissible number of attempts and who are not afforded concessionary attempts by the Royal College of Physicians will be removed from the programme.

Upon successful completion of all assessments and ratification of results, students will be awarded a Diploma in Paediatrics from the Royal College of Physicians of Ireland.

No interim award will be given for partial completion of the programme.

## Examination Format

The Diploma in Paediatrics is divided into three blocks. There will be three exams at the end of each block, representing an even coverage of topics from each block. The learning outcomes addressed in each assessment will be agreed in advance through a curriculum mapping exercise.

Block	Weeks	Skills Portfolio weighting	Exam Weighting	Exam Time limit	Learning Outcomes Addressed
Block 1	Weeks 1-6	Formative	20%	40 minutes	20-25
Block 2	Weeks 7-14	10%	30%	60 minutes	20-25
Block 3	Weeks 15-22	10%	30%	60 minutes	20-25

The skills portfolio will afford students the opportunity to demonstrate the practical or skills-based learnings from the programme. This will take the form of a video submission where the participant carries out a mock patient scenario to assess communication skills.

These exams will be made up of multiple choice and key feature problem questions. The latter are designed to assess divergent thinking which are particularly appropriate to this level of programme where breadth rather than depth of deliberation can be key.

Questions will take the form of short case vignettes requiring students to provide either a reasonable differential diagnosis or recommended investigations based on information presented.

Each exam diet will focus on a range of topics within the relevant 'block' with all learning outcomes assessed across a number of exam diets.

## 7. The role of the Tutor

At the heart of the programme is the tutoring team, made up of an international group of paediatricians and family doctors with a special interest in paediatrics. Tutors are fully supported by the iheed Academic Affairs Department and the Programme Leader / Director.

Tutors will generally deliver the three blocks to a student group, though some tutors may elect to deliver more than one block to different groups, or to deliver the same block to multiple groups.

### Part A – Student Experience

1. Weekly online tutorials
  - Conduct a 1-hour live online tutorial during each week of the programme block, facilitating debate and discussion with learners on the week's topic.
  - Ensure the overall structure and format of your tutorial is aligned to the learning outcomes and adds real-life context to clinical content.
2. Discussion Forum
  - Moderate and provide guidance on weekly asynchronous online discussion forums on selected topics. These discussions are designed to provide a clinical context to help students apply acquired knowledge and explore new knowledge through their referenced discussion forum posts.

### Part B – Programme Assessment

Programme assessment comprises three online exams at the end of each block (weeks 6, 14 and 22 respectively). The majority of questions will be Single Best Answer, however a minority of free-text answers may also feature.

1. Tutors may be asked to grade submissions of free text questions for their group.
2. Tutors will grade the skills portfolio submissions
3. Be available if requested to attend programme committee meetings via video-conference.