

Recommended Undergraduate Paediatric Curriculum

Version 1.0
Approved for use from September 2023

This document outlines the syllabus to be recommended as a guide for those delivering undergraduate medical training in the United Kingdom (UK). It provides a recommended framework for adoption of medical schools for paediatric experience.

This is Version 1.0. As the document is updated, version numbers will be changed and content changes noted in the table below.

Version number	Date issued	Summary of changes

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Introduction

All doctors will come across children and families in their work and it is essential that newly qualified doctors can effectively interact with, assess and care for babies, children and young people. This curriculum provides Medical Schools with a framework and a set of recommended learning outcomes to set the standard for undergraduate paediatric training. Medical schools need a curriculum that is reflective of contemporary paediatric medicine and that is responsive and flexible to the changing landscape of paediatric care. Ultimately the curriculum should provide a framework for longevity, flexibility and to be able to meet the needs of medical students.

This curriculum has been developed building on the strengths of the previous 2015 recommended paediatric curriculum for undergraduates and has involved consultation with stakeholders, including medical schools and foundation students and children and young people.

The curriculum has been developed to align with the RCPCH Paediatric curriculum 'Progress+' August 2023 and identifies knowledge, skills and attitudes/behaviours in child health that we think should be covered during the undergraduate medical course. Importantly, this curriculum has been written to align with the GMC Outcomes for Graduates, Good Medical Practice and thus the upcoming Medical Licensing Assessment (MLA). The curriculum also strives to be supportive of driving standards in paediatric medicine including responding to needs of not only children and young people but also families, carers and the contextual setting in which children and young people find themselves, e.g. education, social care.

Some areas will be covered in a specific child health placement but it is important to consider that delivery of paediatrics can be embedded throughout all aspects of medical school training including GP, A&E and specialist settings. Conversely, child health placements offer an ideal opportunity to gain more generic medical experience such as learning about global health, governance and critical appraisal of the literature.

The curriculum is deliberately brief, defining only the core components of child health for medical undergraduates. The specific details of what is covered, the depth of coverage and how teaching is delivered is up to individual medical schools.

The College hopes that this curriculum represents the beginning of a process; a chance for medical schools and those within them involved in child health teaching to take stock. It is hoped it will act as a springboard for local, regional and national discussion and collaboration, generating ideas which will improve and standardise child health teaching for medical undergraduates in the UK.

Curriculum Purpose

The purpose of the curriculum is to train medical students to acquire a knowledge and understanding of health and illness in babies, children and young people. The curriculum provides a framework for training, articulating the standard required to work at Foundation Doctor level. It provides consensus across medical schools and promotes an understanding of the level of skills, knowledge and behaviours expected of a new Foundation doctor.

The curriculum comprises Learning Outcomes specifying the standard medical students should demonstrate to progress from undergraduate level.

#VoiceMatters

This curriculum has been built with Children and Young People at the centre and has been supported by RCPCH&Us. RCPCH &Us is a network of children, young people and family, working with diverse groups of young patients, their families and friends across the UK each year. Through the work of RCPCH &Us we keep children and young people at the centre of everything we do, supporting their voice to inform, influence and shape the work of RCPCH.

“The best doctor is someone who can change your feelings of health can help you on the worst day possible”

RCPCH &Us

Children and young people have been sharing with us their ideas, hopes and wishes for “the best doctor possible”. 1000s of children and young people have told us what they think is important:

- A doctor who knows about **mental health and wellbeing** for children and young people, how to help and when to get other people to help.
- A doctor who uses a **personalised approach** that includes knowing my likes, interests, hopes, aspirations, about distraction and support styles that match my needs.
- A doctor uses lots of different **communication** styles to support our health needs e.g., using language/visual tools that meet my communication preferences, to be aware of the use of LGBTQ+ terminology/pronouns, to be an active listener and to be able to adapt to support a range of information needs based on disabilities, to be approachable and interact well and be open to our feedback.
- Doctors who are **open minded and non-judgemental**, particularly around child and youth cultures and identities such as not making assumptions about gaming or social media, or being from an LGBTQ+ background, or the impact period pain has on young people.
- Doctors who show **respect, support and kindness**, which will be different for each individual and at different times during supporting their health needs, from being friendly, to having empathy, to taking all worries and concerns seriously, accepting our truth and being smiley and understanding.
- A Doctor who has good knowledge of current **child and youth culture and identity** such as

social media, education, every day mental health stresses (exams, family issues, relationships), LGBTQ+, #BlackLivesMatter, the impact of COVID-19 on our future (education/employment).

- A Doctor who helps to develop **child and youth friendly services**, with welcoming spaces for our health appointments, good signposting, clear confidentiality approaches, ways to involve and empower children and young people.
- A Doctor who understands all of our **medical needs** we might have linked to our healthcare plans and how best to support us in school/employment, about drugs, addictions, vaping, sexual health and relationships, menstrual health, skin conditions, mental health, or being a young carer, as well as being knowledgeable but explaining when you don't know and need help, to read our notes before we come in and to be a great team worker and service representative.
- A Doctor that pushes for **change** by supporting good transition between services, to empower and involve children and young people in their individual care but also service shaping, to link well with other services that could be in health, social care, charities, education, to know about our rights and help us to understand them in terms of consent, UNCRC and the UNCRPD, to challenge others if they are not being the best advocate for all children and young people.

“We want to be heard and understood and build a movement together with you that allows care to be tailored and ensures the best possible experience.”

RCPCH &Us Young People

“The best doctor is someone like you, kind, funny, happy and listens to me and my family”

RCPCH &Us

Using the curriculum

Medical students are recommended to demonstrate achievement of General Paediatric Learning Outcomes throughout their undergraduate period. There are 11 paediatric Learning Outcomes that map directly to the Progress+ postgraduate paediatric curriculum. Some of these are generic skills that will be covered across the undergraduate programme. Our focus here is on the Child Health Specific Outcomes.

Elements of the curriculum

The Learning Outcomes are stated at the beginning of each section. These are the outcomes which the medical student must demonstrate by the end of the undergraduate programme. The learning outcomes link directly to the RCPCH Paediatric curriculum Progress+ (from August 2023). Some are generic in nature and do not necessarily need to be demonstrated within the paediatric context.

Each Learning Outcome is mapped to the General Medical Council (GMC) Good Medical Practice framework and the GMC Outcomes for Graduates.

The Key Capabilities are expected capabilities to be achieved by the trainee. Key Capabilities are therefore also mapped to the GMC Good Medical Practice framework. Key capabilities are not specified for the Learning Outcomes that are not specific to Child Health and will be covered elsewhere in the Undergraduate curriculum.

Learning Outcomes

Paediatric Undergraduate Learning Outcomes		GMC Good Medical Practice Domains	GMC Outcomes for Graduates.
1	Acts as a professional within the boundaries of ethical and legal frameworks (specific to child health) expected of a junior doctor.	1 and 4	1 and 3
2	Communicates effectively with Colleagues, children and young people and their families.	3	2
3	Performs and interprets clinical procedures to meet the needs of children and young people.	1 and 2	2 and 3
4	Conducts a paediatric assessment to enable the initiation of a treatment plan, investigations and differential diagnosis.	1 and 2	2 and 3
5	Helps and empowers children and young people and their families to achieve the best health possible.	4	3
6	Develops own leadership skills and works in partnership with children, young people, families and members of the MDT.	3 and 4	1
7	Prescribes commonly used medication in a safe manner.	2	1 and 3
8	Engages in paediatric quality improvement activities.	2	1
9	Promotes the professional responsibility of Safeguarding.	2 and 4	1
10	Provides teaching for children and young people, families and colleagues.	1 and 3	1
11	Applies an evidence based approach to paediatric practice.	1	2 and 3

Those outlined above in blue are considered generic outcomes and therefore an overarching outcome of application of these principles in the paediatric context will suffice.

Generic Professional Capability from MLA	
1	Obtains relevant information about the patient through appropriate history and physical/mental health examination, formulating a prioritised list of problems and differential diagnoses
2	Assesses and generates management plans for chronic conditions
3	Assesses and generates management plans in emergency and acute presentations
4	Assesses and generates management plans to promote health and prevent disease
5	Assesses and manages risk
6	Behaves in accordance with legal and ethical responsibilities (including equality and diversity principles)
7	Communicates effectively with health care professionals, patients, relatives, carers and other advocates
8	Deals appropriately with complexity and uncertainty including managing multimorbidity and prioritising tasks
9	Demonstrates reflective practice
10	Demonstrates understanding of patient capacity, consent and confidentiality in delivering care
11	Demonstrates understanding of the importance of self-care and personal wellbeing
12	Identifies and requests relevant investigations, interprets results and ensures they are acted on appropriately in the context of the clinical situation, avoiding over-investigation
13	Manages pain
14	Performs procedures safely
15	Prescribes, reviews, communicates and monitors the effects of medicines safely and effectively
16	Safeguards vulnerable patients
17	Symptomatically manages patients approaching end of life
18	Uses and records information safely and effectively
19	Utilises evidence-based guidelines appropriately
20	Works effectively, respectfully and supportively as a member of the team

RCPCH Learning outcome	Generic Professional Capability from MLA
1	6, 10
2	1, 5, 7, 18
3	12, 14
4	2,3
5	4, 8
6	9, 20
7	13, 15, 17
8	9
9	16
10	
11	19

The Generic Professional Capabilities have been taken from Page 8 of the MLA content map [mla-content-map-pdf-85707770.pdf \(gmc-uk.org\)](https://www.gmc-uk.org/learning-and-development/undergraduate-curriculum/2018-2020/mla-content-map-pdf-85707770.pdf) and builds upon the GMC Outcomes for Graduates 2018

Learning Outcome 1

Acts as a professional within the boundaries of ethical and legal frameworks (specific to child health) expected of a junior doctor.	GMP 1 and 4	OFG 1 and 2
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Key Capabilities

Understands the legal and ethical frameworks relevant to child and adolescent health including consent and capacity.	GMP 1	OFG 1 and 2
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Learning Outcome 2

Communicates effectively with colleagues, children and young people and their families.	GMP 3	OFG 2
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Key Capabilities

Listens to children, young people and their families and take their concerns seriously.	GMP 3	OFG 2
Communicates effectively and compassionately with children and young people and their families to explain common and important medical conditions and investigations including in challenging or distressing situations in a way that the child or young person can understand.	GMP 3	OFG 2

Uses digital technology to support communication.	GMP 3	OFG 2
Demonstrates the ability to communicate with colleagues including to: <ul style="list-style-type: none"> • Present clinical findings verbally. • Give a verbal handover. • Write a summary of a consultation in the medical notes. • Write a discharge summary. • Advocating for patients and speaking up if you have concerns about the care of a child or young person. 	GMP 3	OFG 2

Learning Outcome 3

Performs and interprets clinical procedures to meet the needs of children and young people.	GMP 1 and 2	OFG 1 and 2
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Key Capabilities

Obtains consent for common procedures e.g., Venepuncture.	GMP 1 and 2	OFG 1
Measures and interprets vital signs (including heart rate, respiratory rate, oxygen saturation, temperature).	GMP 1	OFG 2
Performs an examination (to include respiratory, cardiovascular, gastrointestinal, central and peripheral nervous system, musculoskeletal, skin, eyes, ears/nose/throat, newborn).	GMP 1 and 2	OFG 2
Performs a developmental assessment of a child under 5.	GMP 1 and 2	OFG 2
Plots and interprets a growth chart.	GMP 1	OFG 2
Constructs and interprets a family tree and recognise role of genetic investigations.	GMP 1	OFG 2
Demonstrates (on a mannequin) Basic Life Support skills including the choking child.	GMP 1	OFG 2

Identifies the common challenges of undertaking practical procedures in children and young people and describes techniques to address these e.g., distraction, play therapists, topical anaesthetic.	GMP 1 and 2	OFG 2
Interprets common investigations in children including blood gases and radiographs (X-rays).	GMP 1	OFG 2
Demonstrates the ability to: <ul style="list-style-type: none"> • Hold and undress a baby • Measure peak expiratory flow rate • Explain and assess inhaler technique in a child or young person • Collects a urine sample from an infant or child and perform bedside urinalysis 	GMP 1	OFG 2

Learning Outcome 4

Conducts a paediatric assessment to enable the initiation of a treatment plan, investigations and differential diagnosis.	GMP 1 and 2	OFG 2 and 3
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Key Capabilities

Demonstrates the ability with any child, young person, parent or carer to take an age and developmentally appropriate history, including birth history, family history, social history, developmental history, immunisation status.	GMP 1 and 2	OFG 2 and 3
Recognises, prioritises and uses a systematic approach (ABCDE) to manage a sick child, including the use of early warning scores.	GMP 1	OFG 2 and 3

Recognises the need to escalate concerns about a sick child or young person and how to do this.	GMP 1	OFG 2 and 3
Identifies in a range of contexts (primary care, acute care, outpatients) the: <ul style="list-style-type: none"> • Key points in the history • Key examination findings • Red flags • Differential diagnosis including functional causes • Initial investigations • Initial clinical management • Apply relevant guidelines where appropriate 	GMP 1	OFG 2 and 3

Please see Appendix 1 for Presentations grid linked to MLA content from Page 20 onwards

Learning Outcome 5

Helps and empowers children and young people and their families to achieve the best health possible.	GMP 4	OFG 3
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Key Capabilities

Undertakes health promotion discussions e.g., Mental health and wellbeing, feeding and healthy eating, accident prevention, smoking/ alcohol/drug use, sexual health and routine health screening.	GMP 4	OFG 3
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Outlines the physiological and environmental influences on growth and behaviour in childhood and adolescence with recognition of the importance of climate change, social determinants of health and health inequality.	GMP 4	OFG 2 and 4
Outlines the range of expected behaviours from birth to adulthood and know when these become pathological.	GMP 4	OFG 3
Understands the importance of mental health and wellbeing from birth to adulthood.	GMP 4	OFG 3
Recognises the impact of living with medical complexity and technology dependence and the importance of symptomatic and palliative care.	GMP 4	OFG 3
Outlines the principles of the childhood immunisation programme in the UK.	GMP 4	OFG 3

Learning Outcome 6

Develops own leadership skills and works in partnership with children, young people, families and members of the MDT.	GMP 2, 3 and 4	OFG 1 and 2
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Key Capabilities

Outlines opportunities to improve patient safety and experience, learning from the experience of children, young people and their families, critical incidents & near misses.	GMP 2 and 4	OFG 1 and 2
Describes the importance of raising concerns if patient safety is or may be compromised.	GMP 2, 3 and 4	OFG 1 and 2

Learning Outcome 7

Prescribes commonly used medication in a safe manner.	GMP 1 and 2	OFG 1 and 2
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Key Capabilities

<p>Writes a safe, accurate and legal prescription for a child using the BNFC and local guidelines where appropriate for:</p> <ul style="list-style-type: none"> • Intravenous fluids (bolus and maintenance) • Common analgesics • Common antibiotics • Oral rehydration solution • Common asthma medications (eg. beta-2 agonists, steroids) • Common emergency drugs (eg. adrenaline for anaphylaxis) 	GMP 1 and 2	OFG 1 and 2
<p>Understands the principles of prescribing in children, taking into account weight, age and body surface area, the differences in drug metabolism and routes of administration. Recognise the specific challenges in paediatric safe prescribing,</p>	GMP 1 and 2	OFG 1 and 2
<p>Identifies common aides to safe prescribing in children eg. British National Formulary for children (BNFC), ward pharmacist. Identify ToxBase as a useful resource in cases of poisoning</p>	GMP 1 and 2	OFG 1 and 2

Learning Outcome 8

Engages in paediatric quality improvement activities.	GMP 3 and 4	OFG 1
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This is a generic outcome, not specific to child health.

Learning Outcome 9

Promotes the professional responsibility of Safeguarding.	GMP 2 and 4	OFG 1
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Key Capabilities

Defines the main types of child maltreatment, describe risk factors and the signs and red flags of child maltreatment.	GMP 2	OFG 1
Identifies the process for raising concerns about child maltreatment and the steps involved.	GMP 2	OFG 1
Understands the duty of care for any health professional to report concerns about child maltreatment.	GMP 2 and 4	OFG 1

Learning Outcome 10

Provides teaching for children and young people, families and colleagues.	GMP 1 and 3	OFG 1
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This is a generic outcome, not specific to child health.

Learning Outcome 11

Applies an evidence based approach to paediatric practice.	GMP 1	OFG 2 and 3
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This is a generic outcome, not specific to child health.

Appendix 1 Presentations grid and MLA

This grid is not an exhaustive list of all possible paediatric presentations and diagnoses but aims to highlight common presenting complaints and underlying differentials. This has been updated from 2015 to include the content that will be covered in the MLA.

Topic	Presentation	Core conditions
Respiratory and cardiovascular disease	Breathing difficulties	<ul style="list-style-type: none"> • Bronchiolitis • Pneumothorax • Inhaled Foreign body
	Cough	<ul style="list-style-type: none"> • Cystic fibrosis • Lower respiratory tract infection • Tuberculosis • Pertussis
	Wheeze	<ul style="list-style-type: none"> • Asthma • bronchiectasis
	Cyanosis	<ul style="list-style-type: none"> • Cyanotic congenital heart disease – Transposition of great arteries • Tetralogy of Fallot
	Murmur	<ul style="list-style-type: none"> • Congenital heart disease – Ventricular septal defect, Atrial septal defect • Innocent murmur
	Stridor	<ul style="list-style-type: none"> • Croup • Epiglottitis • Laryngomalacia • Congenital airway anomalies
	Arrhythmia	<ul style="list-style-type: none"> • Supra ventricular tachycardia
Gastrointestinal/ Hepatic	Abdominal pain	<ul style="list-style-type: none"> • Appendicitis • Intussusception • Peritonitis • Mesenteric adenitis • Functional abdominal pain
	Vomiting	<ul style="list-style-type: none"> • Gastroenteritis • Gastroesophageal reflux disease • Intestinal obstruction and ileus • Pyloric stenosis • Volvulus
	Diarrhoea	<ul style="list-style-type: none"> • Inflammatory bowel disease • Toddler diarrhoea • Gastroenteritis • Food allergies
	Constipation	<ul style="list-style-type: none"> • Functional constipation • Hirschsprung's
	Abdominal mass	<ul style="list-style-type: none"> • Hernia • Neuroblastoma • Wilm's tumour
	Scrotal / testicular pain	<ul style="list-style-type: none"> • Torsion • Epididymitis/orchitis • Undescended testes

Topic	Presentation	Core conditions
Neurological	Abnormal movements	<ul style="list-style-type: none"> • Epilepsy • Febrile convulsion • Nerve palsies • Dystonia • Tics • Infantile Spasms
	Headache	<ul style="list-style-type: none"> • Meningitis/encephalitis • Migraine • Subarachnoid • Tension headache • Brain tumour • Hydrocephalus • Raised intracranial pressure
	Reduced consciousness and lethargy	<ul style="list-style-type: none"> • Intoxication • Hypoglycaemia • Metabolic conditions
	Abnormal Development and Learning Disability	<ul style="list-style-type: none"> • Muscular dystrophies • Cerebral palsy • Genetic syndromes
	Visual concerns	<ul style="list-style-type: none"> • Conjunctivitis • Periorbital and orbital cellulitis • Visual field defects • Cranial nerve palsies
Dermatology/ Renal/ Haematology	Swelling (inc lymphadenopathy)	<ul style="list-style-type: none"> • Reactive lymphadenopathy • Epstein-Barr virus • Mumps • Lymphoma
	Pallor	<ul style="list-style-type: none"> • Iron deficiency anaemia • Pancytopenias • Sickle cell • Thalassaemia
	Urinary symptoms (dysuria, haematuria, reduced urine output, oedema)	<ul style="list-style-type: none"> • Urinary tract infection • Enuresis • Hemolytic uremic syndrome • Nephrotic syndrome • Glomerulonephritis
	Bruising	<ul style="list-style-type: none"> • Haemophilia • Immune thrombocytopenic purpura • Leukaemia • Non accidental injury
	Polyuria/Polydipsia	<ul style="list-style-type: none"> • Diabetes mellitus
	Rash	<ul style="list-style-type: none"> • Eczema • Candidiasis • Cellulitis • Impetigo • Measles/rubella/viral exanthema • Disseminated intravascular coagulation • IgA Vasculitis (formerly known as Henoch Schonlein Purpura) • Herpes simplex virus • Human papilloma virus • Scabies

Topic	Presentation	Core conditions
Musculo Skeletal Disorders	Hip pain and limp	<ul style="list-style-type: none"> • Septic arthritis • Developmental dysplasia of the hip • Perthe's • Slipped upper femoral epiphysis
	Musculo skeletal abnormalities	<ul style="list-style-type: none"> • Rickets • Congenital anomalies
	Swollen joint	<ul style="list-style-type: none"> • Septic arthritis • Inflammatory arthritis
The Neonate	Feeding difficulty	<ul style="list-style-type: none"> • Malnutrition • Breast feeding • Cleft palate
	Jaundice	<ul style="list-style-type: none"> • Biliary atresia • Hepatitis • Physiological jaundice • Haemolytic disease
	Prematurity	<ul style="list-style-type: none"> • Respiratory distress syndrome
	Crying baby	
	Congenital abnormalities and the dysmorphic child	<ul style="list-style-type: none"> • Down Syndrome and other trisomies • Turners • Skeletal dysplasia
	SUDI (Sudden unexpected death in infancy)	
	Problems at birth	<ul style="list-style-type: none"> • Hypoxic-ischemic encephalopathy • Ambiguous genitalia/Congenital adrenal hyperplasia • Birthmarks • Cephalohaematoma • Talipes • Plagiocephaly • Growth restriction - Small for gestational age/ Intra Uterine growth retardation • Spina Bifida • Hypospadias

Topic	Presentation	Core conditions
General and Mental health	Fever (incl recurrent infections)	<ul style="list-style-type: none"> • Human immunodeficiency virus • Influenza • Kawasaki disease • Malaria • Meningitis • Otitis media • Tonsillitis • Toxic shock • Upper respiratory tract infection
	Collapse	<ul style="list-style-type: none"> • Anaphylaxis • Sepsis • Diabetic Ketoacidosis • Cardiac arrest • Respiratory arrest • Breath holding and reflex anoxic seizure
	Behavioural Difficulties	<ul style="list-style-type: none"> • Attention Deficit Hyperactivity Disorder • Autism
	Mental health (Deliberate Self Harm, overdose, suicidal thoughts)	<ul style="list-style-type: none"> • Eating disorders • Depression • Anxiety • Conduct disorders • Substance misuse • Medically unexplained symptoms
	Sexual health and gender dysphoria	
	Accidents, Poisoning and Trauma including safeguarding	<ul style="list-style-type: none"> • Non accidental injury • Head injury • Subdural
	Abnormal growth and puberty (Faltering growth)	<ul style="list-style-type: none"> • Coeliac and food allergies • Obesity • Precocious and delayed puberty • Short stature • Cushings Syndrome • Hypothyroid/thyrototoxicosis • Malnutrition
	Sleep disturbance	<ul style="list-style-type: none"> • Obstructive sleep apnoea • Infant sleep

