

# Undergraduate curriculum for child health – November 2015

## Introduction

This is the national child health curriculum for medical undergraduates. All doctors will come across children and families in their work and it is essential that newly qualified doctors can competently interact with, assess and care for children and young people.

This curriculum has been developed through a two year collaborative consultation involving clinicians, academics and parents from across the United Kingdom. This culminated in a three stage modified Delphi process with contributions from consultant paediatricians, academic paediatricians, general practitioners, trainee paediatricians, specialist nurses and medical students. We have reviewed a range of existing medical school curricula in addition.

The curriculum identifies knowledge, skills and attitudes in child health that we think should be covered at some stage during the undergraduate medical course. Many areas will be covered in a specific child health placement. 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 curriculum comprises both child-specific and generic competencies. It therefore maps to the overarching outcomes of Tomorrow's Doctors (2009) as well as identifying specific outcomes for child health. Child health placements offer an ideal opportunity, for example, to learn about global health, governance and critical appraisal of the literature.

Our hope is 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. We hope it will act as a springboard for local, regional and national discussion and collaboration, generating ideas which will improve child health teaching for medical undergraduates in the UK.

Many thanks to all those who contributed to this document.

By the end of undergraduate training, the medical student should be able to:

### **1) History taking & communication**

Demonstrate the ability with any child\*, young person, parent or carer to:

- Take an age- and developmentally-appropriate history
- Explain common and important medical conditions
- Explain common procedures and investigations
- Obtain consent for common procedures eg. venepuncture
- Undertake health promotion discussions eg. healthy eating, accident prevention

(\*Unless otherwise stated, any reference to a "child" means "infant, child or young person")

Demonstrate the ability with adolescents to:

- Take a history including HEADSS (Home & Environment, Education & Employment, Activities, Drugs, Sexuality, Suicide/Depression)
- Undertake health promotion discussions eg. smoking/alcohol/drug use, sexual health

Demonstrate the ability to communicate with colleagues including to:

- Present clinical findings verbally
- Give a verbal handover
- Write a summary of a consultation in the medical notes
- Write a discharge summary
- Construct and interpret a family tree

Outline the principles of (but not expected to perform independently):

- Explaining concerns about child maltreatment
- Breaking bad news

### **2) Examination**

Demonstrate in any child or young person the ability to:

- Measure vital signs (including heart rate, respiratory rate, oxygen saturation, temperature)
- Perform an examination (to include respiratory, cardiovascular, gastrointestinal, central and peripheral nervous system, musculoskeletal, skin, eyes, ears/nose/throat)
- Plot and interpret a growth chart

Demonstrate the ability to:

- Hold and undress a baby
- Perform a newborn examination
- Perform a developmental examination in a child under 5 years
- Measure peak expiratory flow rate
- Assess inhaler technique in a child or young person
- Collect a urine sample from an infant or child and perform bedside urinalysis

### 3) Recognition and management of the sick child

- Prioritise the care of a sick child
- Use a systematic approach (ABCDE) to the care of a sick child
- Demonstrate basic airway management (including appropriate airway positioning, bag-valve mask ventilation)
- Deliver age-appropriate cardio-pulmonary resuscitation
- Recognise the need for help and identify how to obtain it
- Calculate a Paediatric Early Warning score (using scoring system in place locally)
- Use the Paediatric Early Warning score to identify unwell or deteriorating children

### 4) Common and/or serious presentations

Identify **in a range of contexts** (primary care, acute care, outpatients) the:

- Key points in the history
- Key examination findings
- Red flags
- Differential diagnosis
- Initial investigations
- Initial clinical management
- Existence of a national guideline (where applicable)

of/for the following clinical presentations:

General	Respiratory/ Cardiovascular/ENT	Gastrointestinal/ Hepatic/ Endocrinological	Neurological	Dermatological/ Renal/ Haematology/ Musculoskeletal	Neonatal/ infant
Fever	Breathing difficulty	Abdominal pain	Seizure(s)	Bruising	Feeding difficulty
Collapse	Cough	Vomiting	Head injury	Rash	Jaundice
Faltering growth	Wheeze	Diarrhoea	Headache	Swelling	Prematurity
Abnormal behaviour	Cyanosis	Constipation	Reduced consciousness	Pallor	Crying baby
Lethargy	Murmur		Abnormal development	Limp	

*NB. The grouping by body system here is for ease of curriculum mapping and is not intended to limit the differential diagnosis*

Demonstrate for the above presentations the ability to:

- Identify the clinical presentation
- Make an initial assessment of the child
- Initiate basic management
- Seek help as appropriate

## 5) Prescribing

- Explain prescription by weight, age and body surface area in children
- Identify common prescribing errors in children
- Outline the differences in drug metabolism between infants, children and adults
- Identify 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
- Write a safe, accurate and legal prescription for a child using the BNFc and local guidelines where appropriate for:
  - 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)

## 6) Practical procedures/investigations

- Identify the common challenges of undertaking practical procedures in children
- Describe techniques for undertaking practical procedures in children eg. distraction, play therapists, topical anaesthetic
- Outline the need to justify practical procedures in children
- Interpret common laboratory tests in children
- Interpret blood gases in children
- Interpret chest radiographs in children

Outline the principles of (but not expected to perform independently):

- Aseptic non-touch technique for practical procedures in children
- Common procedures in infants/children eg. heelprick blood tests

## 7) Normal events, growth & development

- Outline the physiological influences on normal growth in childhood
- Identify the main physiological changes from birth to adulthood
- Outline normal feeding and eating behaviour from birth to adulthood
- Outline normal behaviour patterns from birth to adulthood
- Describe the main developmental milestones of children 0-5 years
- Outline the principles of the childhood immunisation programme in the UK

## 8) Safeguarding

- List the risk factors for child maltreatment
- Define the main types of child maltreatment
- Describe the symptoms, signs and red flags of child maltreatment
- Identify the procedure for raising concerns about child maltreatment
- Identify the duty of care for any health professional to report concerns about child maltreatment

## 9) Legal & ethical basis of child health

- Explain the principles of consent in children and young people including Fraser competence
- Outline the principles of confidentiality in relation to children and young people
- Explain who can have parental responsibility for a child
- Identify ethical and legal dilemmas in child health

## **10)Public health/Global health**

- Explain the concept of notifiable diseases
- Identify national sources of information about notifiable diseases in children
- Outline the social and environmental determinants of child health in the UK and abroad
- List some of the particular health needs of vulnerable groups in child health eg. refugees, looked after children

## **11)Governance, patient safety & best practice**

- Explain the importance of patient safety in relation to child health
- Outline opportunities to improve patient safety within child health eg. learning from critical incidents & near misses, quality improvement projects
- Describe the importance of raising concerns if patient safety is or may be compromised
- Demonstrate commitment to continued improvement, reflection and learning (including from families)
- Demonstrate the ability to perform a basic literature search to answer a clinical question in child health

## **12)Attitudes/behaviours**

*This section is intended to complement and be seen as an adjunct to the principles of good medical practice as laid down by the General Medical Council.*

General principles of child health for medical students:

Children are not scary

Children are different from adults

Child health and welfare is important for all doctors

Multiprofessional team working is a vital component of child health practice

Adopt an approach to children, young people and families which:

- is developmentally appropriate
- is empathetic and holistic
- is non-judgemental and open minded
- empowers children, young people and families and works collaboratively with them
- shows an understanding of the impact of illness, disease and disability on children, families and their community as well as on friendships, social development and education
- recognises the importance of family in a child's health, growth and development
- shows a willingness to listen to children, young people and their families and take their concerns seriously

Adopt an approach to colleagues which demonstrates:

- respect for the multiprofessional team in child health
- willingness to work constructively as part of a multiprofessional team
- willingness to share skills and ideas with others

Please send any comments or suggestions about this curriculum to [childhealthcurriculum@gmail.com](mailto:childhealthcurriculum@gmail.com)