

A Framework of Competences for Level 3 Training in General Paediatrics

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FOREWORD

I am very pleased to present this final stage, Level 3, of our Framework of Competences in Paediatrics. This level 3 document builds on the two preceding frameworks we have published, for Basic Specialist Training and for Core Higher Specialist Training, now re-named as Levels 1 and 2. The emphasis is firmly on the achievement of competences and not on a time-based training programme. From August 2007 all trainees will enter specialty training within the framework outlined in the Modernising Medical Careers initiative. Achievement of these competences will determine a trainee's progress through the specialty training programme.

The development of this Level 3 framework, with our fifteen sub-specialty curricula, has represented a huge amount of work. I would like to thank all those chairs and members of our College Specialist Advisory Committees (CSACs) who have shown such commitment and support to this project. In particular, we would like to thank Dr Edward Wozniak and Dr Gabrielle Laing, Chairs of General Paediatrics and Community Child Health CSACs respectively, who have been involved in the development of the competences at all three levels.

The College Officers responsible for training have guided and supported this work unstintingly for the last eighteen months and I would like to thank Dr Mary McGraw, Dr Claire Smith and Dr Ian Doughty for their commitment and involvement in the project. In addition, we would like to thank Kim Brown for the development and co-ordination of this work.

These documents have been prepared for submission to PMETB in July 2006 and we hope to publish them, subject to their approval, by Christmas 2006.

Patricia Hamilton
President, Royal College of Paediatrics and Child Health
1 July 2006

Section 1 Introduction

Who is this book for?

It is for doctors at Level 3 in their training in General Paediatrics, their tutors and educational supervisors.

Why do I need it?

The book gives you and your tutors guidance about the areas you need to cover during your training. It gives a clear picture of what you have to have achieved by the end of this stage of training, before you become a consultant. You need this book as it forms the basis of your assessment at the end of Level 3 Training.

How do I use the book?

You can sit down with the book on your own and use it to help you identify areas of practice that you need to work on and those areas in which you feel fairly confident. You can talk to your tutor about the balance of your experiences and look for ways to ensure that you cover all the areas you need to.

Progression

This is the final stage in your training as a paediatrician. The competences you gained during Level 1 (Basic Specialist Training) and Level 2, Core Higher Specialist Training have formed the basis for your progression into Level 3 training and on to a Consultant post. Table 1 (page 8) illustrates this progression through your training.

A note about the format of this document

This framework sets out the competences that you need to achieve by the end of Level 3 Training. These build on and develop statements of competence set out for Levels 2 and 3. You are expected to work from all three documents throughout this final stage of your training to ensure that you maintain and continue to develop areas of competence already acquired as well as developing new ones.

Sections 2 and 3 present new statements of competence for Level 3 only, in order to keep the focus clear. Trainees will need to refer back to previous documents for Level 1 and 2 competences in General and General Clinical competences. However, we have retained statements from earlier stages of training in the sub-speciality sections

in Section 4, so that the range of competences across Levels required is clear. The competences set out in the tables appear in normal type, to indicate those brought forward from Levels 1 and 2 and in bold to highlight new levels of competence for Level 3. In Section 5, competences from Levels 1 and 2 are included. The expectation is that trainees will gain further expertise in these procedures and investigations in this final stage of training.

A note about assessment

The statements in this book have been expressed as *learning objectives*. These are the focus of your training.

When it comes to your assessment, at the end of this phase of your training, we will want to know how *well* you have achieved these objectives and to be confident that you are fit to practise as a Paediatric Consultant. This is what we mean when we talk about your *competence*. So while here you may have, for example, a number of detailed objectives relating to consultation skills or communicating with children, in your assessment we will want to see how you bring all these together and how competent you are overall in your communication skills. This document is not intended as an assessment document but to support training. The assessment of your competence will be by work-based assessments already in use and currently being developed.

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Progression in the Professional Development of a Paediatrician

During BST	During HST	Continuing development as a consultant
<i>Acquires fundamental knowledge base</i>	<i>Applies knowledge base to provide appropriate clinical care</i>	<i>Evaluates knowledge and modifies clinical care pathways to enhance patient care.</i>
<i>Acquires clinical examination and assessment skills and applies these in clinical practice</i>	<i>Analyses clinical findings to derive appropriate differential diagnosis and management plans.</i>	<i>Evaluates assessment findings; refines and modifies management plans.</i>
<i>Acquires all basic technical skills and basic life support</i>	<i>Proficient at all basic technical procedures, some complex procedures and provides advanced life support.</i>	<i>May relinquish some skills in these areas dependent on area of clinical practice. May acquire specialty specific skills.</i>
<i>Performs allocated tasks and begins to plan tasks</i>	<i>Plans and prioritises tasks appropriately.</i>	<i>Increasing expertise with evaluation of priorities and appropriate delegation across a wide range of professionals.</i>
<i>Performs allotted teaching tasks</i>	<i>Plans and delivers teaching to trainees and other professionals. Develops peer mentoring skills.</i>	<i>Plans and modifies curricula. Performs assessment and appraisal. Able to provide mentorship.</i>
<i>Aware of management issues</i>	<i>Develops management skills and able to take responsibility for a defined project. Contributes to Committees.</i>	<i>Can negotiate and deal with conflict. Can contribute to and lead committees. Evaluates and modifies management structures.</i>
<i>Performs allocated audit projects and understands the audit cycle</i>	<i>Designs audit project and understands risk management. Able to write appropriate clinical guidelines. Understands the Clinical Governance implications</i>	<i>Facilitates audit, and evaluates results. Evaluates guidelines and ensures implementation of appropriate changes</i>
<i>Understands the principles of critical appraisal and research methodology</i>	<i>Able to appraise the literature critically and apply to clinical practice</i>	<i>Able to evaluate critical appraisal performed by others. Able to lead research projects and support others in research.</i>
<i>Works in multi-professional teams</i>	<i>Able to take the lead and accept leadership from other members of the multi-disciplinary team</i>	<i>Evaluates and modifies multi-professional team-working</i>

DRAFT

What is a Paediatrician?

Paediatricians have a detailed knowledge and understanding of diseases in children. They are skilled in looking at health and ill-health in babies, children and adolescents, and at specific health issues, diseases and disorders related to these stages of growth and development. They develop expertise in practical procedures specifically related to the good clinical care of small babies and children. Paediatricians work in multi-disciplinary teams and with colleagues from a wide range of professional groups in hospitals, general practice and in the community, in social services and schools and with the voluntary sector. They have strong communication and interpersonal skills and take on a variety of roles within their different communities of practice. They share expertise effectively and assume the responsibilities of teaching, leadership and management roles where appropriate. They work with colleagues to ensure consistency and continuity in the treatment and care of children and young people in all aspects of their well-being. They are committed to a policy of advocacy for a healthy lifestyle in children and young people and for the protection of their rights.

Paediatricians are doctors who have a particular compassion and respect for children, young people and their families and enjoy working with them. They have an expert understanding of the ways in which illness affects the child, the parents and the rest of the family and are skilled in the management of emotionally complex family situations. They show patience and sensitivity in their communications with children and their families and a particular ability to explore each individual's perspectives of a problem. They are aware of religious and cultural beliefs that parents might hold about the treatment of their children. They know how to respond in these cases, when to seek support and where to find legal and ethical guidelines to support their practice.

Paediatricians ensure that they are up-to-date in their practice and endeavour to promote evidence-based medicine where possible. They are keen to develop innovative approaches to teaching in paediatrics and to research. They are committed to the highest standards of care and of ethical and professional behaviour within their specialty and within the medical profession as a whole. Central to their work is the principle that all decisions should be made in the best interests of the child or young person in their care.

Contexts for Learning

In drawing up this framework of competences, we have envisaged a wide range of opportunities in which trainees will learn. They will be expected to work on their own, using databases and electronic libraries to research particular conditions or areas of professional practice. This work might be in preparation for a clinic, or a presentation to a group of trainees and supervisors. Trainees may engage with a distance-learning programme in order to develop greater expertise in an area that interests them or that they need to strengthen. Supervisors will need to ensure opportunities for trainees who have undertaken independent study of this kind to share their learning with others. It is through teaching about something you have read or learned or understood differently that learning is consolidated and questioned.

Feedback is essential at all stages of the teaching and learning process. Even in the course of a lecture or on a ward round trainees can communicate important messages about their learning needs through facial expressions and body language as well as in their answers to questions. Tutors need to be ready to pick up on these, to seek out actively trainees' responses to their teaching so that they can make adjustments accordingly and ensure that effective learning takes place.

As well as independent study, trainees will find themselves in a number of different communities of practice. In many cases, their learning will result from shared discussion around the diagnosis of a condition, for example, or the identification of an injury. Experienced colleagues from a range of disciplines may join a specialist team, each sharing their expertise, in order to come to a safe diagnosis or decision about how to proceed, for example in the case of suspected abuse. Trainees need to be encouraged to join these discussions so that they develop confidence in their communication skills with colleagues and in their ability to contribute to clinical decision-making.

Supervisors need to be aware of the importance of asking questions in these situations and of the most effective way to do this, so that trainees are fully engaged and learning as they listen. Closed and open questions have their place, and explicit educational strategies such as 'scaffolding' are essential. The teacher takes the

learners, step by step, from their initial level of understanding of a condition or a process, for example, to a deeper or more extensive understanding, through a formal cycle of informing, questioning, informing, testing out and consolidating new information. Ward rounds and clinics offer good opportunities for this kind of interaction, with individual trainees and groups. The exchange may be brief or sustained and it is the close focus on understanding which gives this teaching technique its power. Trainees are also encouraged to write a reflective log and it is important to make clear that this needs to go beyond a narrative of events to an analysis of the process of learning they are experiencing. This, in turn, will equip them well to become teachers themselves of less experienced colleagues.

The college is committed to an explicit educational approach. Identifying contexts for learning is the first step. But it is important to go beyond this to a consideration of the way in which different contexts influence the teaching and learning that take place or that are required. It is helpful to be able to identify apprenticeship models, or experiential learning but these alone do not tell us much about the teaching and learning process. The curriculum sets out *what* is to be learned and we know *where* these things will be learned. But it is also essential to understand *how* teachers and trainees will learn.

With the completion of the curriculum, the college is now working on resources to support the teaching and learning of its contents and on guidance for trainees and supervisors on the pedagogical process of training in Paediatrics.

For an overview of teaching and learning in postgraduate medicine, see Liberating Learning (COPMED, 2002).

Section 2 General Competences

Knowledge and Understanding

Substantial re-wording or new statements of competence for Level 3 Training

- understand the impact of physical illness on mental functioning, for both children, young people and their parents and the effect of each upon the behaviour and functioning of the other
- understand the impact of relations and mental health upon a child's or young person's current and past emotions and behaviour
- understand the impact of culture and ethnicity in presentations of physical and psychological conditions
- know, understand and be able to compare and contrast medical and social models of disability
- understand the relationship between local health, educational and social service provision
- know about the agencies, both statutory and voluntary, that can provide general and condition-specific support to children, adolescents and their families in coping with their health problems
- know the objectives of paediatric follow-up
- understand and take account in their practice of risk issues to themselves and others, including those related to personal interactions, and bio-hazards
- have a working knowledge of risk assessment and its application to personal, professional, clinical and organizational practice
- understand and take account in their practice of measures to reduce clinical risk
- know how relative and absolute risks are derived and the meaning of the terms predictive value, sensitivity and specificity in relation to diagnostic tests
- know the legal and ethical guidelines to support their work and where to find more information when required
- be aware of the multidisciplinary investigation of sudden unexpected death in infancy
- understand the management of bereavement and be aware of national guidance documents on this

- understand the purpose of post-mortem examinations and know about procedures
- understand the process of bereavement in children and families and recognise abnormal grieving patterns

(see Good Medical Practice (GMC, 2001) - Good Clinical Care: 2, 3; Delegation and Referral: 45, 46.)

Skills

Substantial re-wording or new statements of competence for Level 3 Training

- recognise the breadth of different presentations of common disorders
- recognise features of undifferentiated illness which suggest serious or unusual pathology and initiate the appropriate clinical response with appropriate urgency
- recognise the diseases and host characteristics which make certain presentations life-threatening and manage these situations with vigilance and appropriate urgency
- be able to recognise when both physical and psychological problems are present and when more than one condition or disorder may be present
- be able to assess and manage co-morbidities associated with the range of paediatric presentations
- take a history from a child, young person and parent of the presenting difficulties to acquire information in sufficient breadth and depth in a range of possible symptom areas to allow accurate formulation of the problem
- be able to undertake an assessment of the mental state of children and young people, taking into account their age and stage of development and know whether they have the skills to help them and when to seek more expert paediatric, mental health or psychiatric assessment
- have developed observation skills to support their interpretation of children's or young people's developmental levels and possible physical signs when they are unable to co-operate with formal assessments
- be able to supplement clinical assessment with standardised instruments or questionnaires

- know when to gather information from other professionals e.g. those working in education, social work or from others who see the child in a variety of settings
- be able to seek the views of children and young people, whatever their illness, regarding individual care and service planning, using expert resources appropriately
- be able to make a decision on the ‘most likely’ diagnosis and discuss this effectively with children and young people and their parents or carers, and with other colleagues, in the context of a plan of investigation and management
- be able to formulate a management plan for complex cases
- be able to review and modify a management plan as appropriate and know when to request help from senior colleagues or other services
- be able to take responsibility for the longer-term management of common acute and chronic cases leading or working with the multi-disciplinary and multi-agency teams, sub-specialists or networks as appropriate
- have developed expertise in practical procedures specifically related to the clinical care of small babies and children, and young people
- be able to develop and work within care pathways
- be able to manage and know how to obtain support for the consequences of chronic illness for a child, young person and their family
- be able to work effectively in multi-disciplinary teams and with colleagues from a wide range of professional groups
- be able to interact effectively with professionals in other disciplines and agencies and from the voluntary sector
- be aware of their role in the team and of their impact in the team
- have developed skills in recording consultations accurately and sensitively whilst maintaining a good rapport with the young person and family
- have developed a wide range of effective age-appropriate communication skills specific to their work with babies, children, young people and their families

- have developed credibility in their relationships with children, young people and their families, and with colleagues through their knowledge and skills and experience in clinical practice and in their ability to work independently
- have developed strategies to manage a child's or young person's anxiety and personal anxieties
- have developed basic behavioural management skills with parents, children and young people and with other professional colleagues
- be able to recognise, acknowledge and manage different levels of parental anxiety
- be able to assess patterns of relationships and functioning within a family and how these might impact on a child's or young person's illness, seeking professional advice where appropriate
- have developed effective skills in the management of emotionally complex family situations
- be able to recognise indicators of stress or mental health problems in family members and communicate appropriately with relevant professionals
- be able to remain calm in stressful or high-pressure situations and take a timely, rational approach to the problem
- be able to approach new situations which require good clinical judgement with an analytic and informed approach
- show confidence and independence in decision-making in the care of patients
- be able to apply effectively to their practice the knowledge and understanding acquired during training
- have developed a reflective approach to their practice, with an awareness of their level of expertise and limitations and their development needs
- show an ability to learn from their previous good practice, and from clinical errors
- be able to practise evidence-based medicine and understand and analyse critically its limits
- be able to understand the limitations of guidelines, how to use guidelines effectively and when it is appropriate to work outside guidelines
- have developed skills to deal with issues of confidentiality and stigma associated with the presenting difficulties and family background issues

- be able to discuss an assessment of the psychosocial health of a child or young person with the multi-disciplinary team while respecting patient confidentiality

(See Good Medical Practice (GMC, 2001) - Good Clinical Care: 2,3; Maintaining Trust: 19; Working with Colleagues 34,36; Probity: 50.)

Values and Attitudes

Substantial re-wording or new statements of competence for Level 3 Training

- be committed to a policy of advocacy for a healthy lifestyle in children and young people and for the protection of their rights
- understand national and contribute to local initiatives aimed at reducing inequalities in child health and well-being
- practise with compassion and respect for children, young people and their families and act as a role model for others
- adopt an open-minded approach to equality and diversity in their practice
- be aware of the effects of social, cultural and religious context and conflict upon families
- understand the importance of cultural diversity and the difficulties where religious and cultural beliefs that parents might hold about the treatment of their children are in conflict with good medical practice and know when legal and ethical guidelines will support your management or view of the situation
- have developed strategies to manage relationships where health-care beliefs might cause conflict
- be able to advise patients appropriately on debates and controversies in health care
- be sensitive to the effects of stigma on children and families in relation to medical conditions
- be able to work effectively with children, young people and parents or carers, to agree and help them follow management plans
- be able to work effectively with young people who may have or may develop health care beliefs which are in conflict with those of parents or professionals, and know when legal and ethical guidelines will support your management or challenge of the situation

- be able to accept complex and difficult challenges
- show an understanding of the importance of ensuring a healthy balance between professional and domestic priorities
- have the willingness to acknowledge and reflect on the way in which they may, influenced by their earlier life experiences, have an impact on perceptions of and interactions with young people, their families and professionals

(See Good Medical Practice (GMC, 2001) - Good Medical Practice: 1; Good Clinical Care: 5; Maintaining Trust: 19; Working with Colleagues: 36.)

Teaching and Research

Substantial re-wording or new statements of competence for Level 3 Training

- have developed a range of effective teaching and learning skills in a range of clinical contexts
- be able to identify learning needs in a wide range of professionals and build on this in their teaching
- be able to elicit and act upon feedback on content and presentation of teaching
- be able to participate in teaching and research on topics within their specialty and in related areas
- conduct research with honesty and integrity, seeking ethical approval where appropriate and safeguarding the interests of patients
- demonstrate an understanding of ‘good clinical practice’ for all aspects of the conduct of clinical trials
- demonstrate an understanding of the role of ethics committees for clinical studies and the process of ethics applications
- understand the techniques used in epidemiological studies
- demonstrate an understanding of how to perform and interpret systematic reviews, how they differ from narrative reviews and understand the principles of meta-analysis
- understand the difference between population-based assessments and unit-based studies and be able to evaluate outcomes for epidemiological work

- be able to develop clinical guidelines, understand how they are produced nationally and how these should be used to guide their own practice
- be able to evaluate research effectively in paediatrics and child health
- take responsibility for the training, supervision and assessment of undergraduates and trainees and other professionals such as nurses, teachers and social workers in and outside the specialty
- have developed skills in the presentation of information relevant to their clinical practice for a range of audiences, including spoken presentations at meetings, written information for children and families and training materials for different groups of colleagues
- be able to lead departmental teaching programmes, including journal clubs
- be willing to accept mentoring as a positive contribution to their own professional development
- be willing to learn from others, to discuss cases openly and to seek advice as appropriate and as necessary

(See Good Medical Practice (GMC, 2001) - Teaching and training, appraising and assessing: 13, 14, 15, 16; Probity: 51.)

Leadership and Management

Substantial re-wording or new statements of competence for Level 3 Training

- be able to provide specialist support to hospital- and community-based paediatric services including primary care
- be able to take on a leadership role in a multi-disciplinary team when appropriate, for example by representing the health needs of a child, young person and their family at a discharge meeting, and know when it may be inappropriate to do so
- be able to work effectively in multi-agency teams, for example, with social workers and teachers, and have developed an awareness of their own role within the team and of the skills and expertise of others
- be confident to make decisions within a team and be aware of their impact on other team members

- be able to advise the team providing advanced life support and to liaise effectively with anaesthetic and PICU staff
- demonstrate effective leadership skills in clinical situations, for example through their ability to organise, prioritise and delegate, and be able to help others to develop these skills
- have skills and strategies to manage conflict effectively
- have understanding and skills to be able to participate effectively in clinical and management meetings
- have developed effective administrative skills including ways to make best use of secretarial resources
- be able to handle enquiries from the press and other media effectively
- recognise their own working preferences and accept different approaches of colleagues
- know how to respond appropriately to health service targets and be able to participate in the development of services
- be able to work with stake-holders so that a client- or patient-centred service is created and sustained
- have gained an understanding of national and local regulatory bodies, particularly those involved in standards of professional behaviour, clinical practice and education, training and assessment
- understand the value and limitations of evidence-based medicine

(See Good Medical Practice (GMC, 2001) - *Working with Colleagues*: 34, 35, 36, 39, 42.)

Personal Commitment to Professional Standards

Substantial re-wording or new statements of competence for Level 3 Training

- understand the duty of all professionals working with children to report concerns about child protection issues to Social Services
- be able to contribute to the implementation of national and local health policy initiatives

- know and follow key legal and ethical guidelines relating to confidentiality, consent to treatment, the right to refuse treatment, continuing changes in the law and its interpretation and be aware of variability in Scotland, Wales and Northern Ireland
- be able to generate local and evaluate national clinical guidelines and protocols in paediatric practice and public health and recognise the individual patient's needs when using them
- participate and take responsibility for clinical governance activities, and encourage and support colleagues in their participation
- be able to carry out audit in a range of settings in partnership with all stakeholders in order to identify best practice
- know about and participate in clinical and research special interest groups relevant to their specialty
- know when in the interest of the child it may be necessary to break confidentiality
- know how to find, review and maintain relevant knowledge in their specialty in order to maintain their fitness to practise
- ensure that they are up-to-date in their practice and promote evidence-based medicine where possible
- be able to evaluate their own performance critically
- be open about sharing and reviewing their practice with others
- be aware of local processes for dealing with and learning from clinical errors and to be able to work within them

(See Good Medical Practice (GMC, 2001) - 1; Maintaining Good Medical Practice: 10, 12; Relationships with Patients: 17; Working with Colleagues: 35; Dealing with Problems in Professional Practice: 26,27, 29, 30. Probity: 58.)

See also for all of these sections: Good Medical Practice in Paediatrics and Child Health,², Royal College of Paediatrics and Child Health (2002).

² *Good Medical Practice in Paediatrics and Child Health*, London: Royal College of Paediatrics and Child Health (2002). Online at www.rcpch.ac.uk/publications/recent_publications.html

Communication Skills in Paediatrics

Substantial re-wording or new statements of competence for Level 3 Training

- understand the importance of directing communications to the baby, child or young person as well as to parents and carers
- have developed skills to establish a child's or young person's and family's understanding of a situation and to build on this effectively in discussion about the condition and its management
- understand the importance of seeking the views of all children and young people to inform decisions about their individual care and to encourage their participation in their care
- encourage children and young people to participate in their individual care and in the development of services, using expert resources appropriately
- have effective active listening skills in consultations with children and young people and understand the need to respect their views in accordance with their age and maturity and to respond appropriately where, for example, a child or young person is felt to be vulnerable
- have developed effective skills in working with children, young people and families to achieve concordance in planning management and treatment, enabling children and young people to maximise control over their illness and its management
- be able to respond appropriately, and know where to find assistance, in cases where a child, young person or family may not all speak English or where there is a sensory impairment that may affect understanding
- be able to respond to babies, disabled children or young people who may not be able to express themselves verbally, including those who might be in pain or distress
- be able to recognise, interpret correctly and respond to verbal and non-verbal cues from children, young people and parents
- have developed observation skills to support their interpretation of children's or young people's developmental levels and possible physical signs when they are unable to co-operate with formal assessments
- demonstrate appropriate responses and empathy for children, young people and their families experiencing difficulty and distress

- have developed a range of language strategies, such as the use of metaphor or images which relate to everyday life, to explain clearly to a child or young people and their family, their symptoms, condition or treatment, their feelings or behaviour
- be able to counsel parents about serious conditions and abnormalities within their area of expertise
- have effective strategies for careful and appropriate use of language in difficult and challenging circumstances, for example, at the birth of a baby with disabilities or where there is a conflict with colleagues
- be able to discuss the indications, benefits and adverse events of a procedure to patients, relatives and carers in a manner that will allow informed consent
- have developed a range of approaches to communicating the breadth of diagnostic possibilities and other clinical information to children, young people and their families so that consent is always informed and the plan and progress of treatment understood
- be able to advise children, young people and their families about the importance of concordance and about medication interactions and side-effects
- be able to convey and share effectively difficult or bad news, including end-of-life issues, with children, young people, parents or carers and help them to understand any choices they have or decisions to be made about ongoing management
- be able to prepare and discuss with parents, carers and other professionals “Do not attempt resuscitation” policies as appropriate, taking due account of the Human Rights Act (1998), ensuring that the best interests of the child are held as paramount at all times
- be able to seek consent for post-mortem examinations and communicate effectively with the Coroner
- be able to confirm with children, young people and their families their understanding of a situation from what has been said and written and clarify this as appropriate
- be able to explain the role of other professionals and agencies to children, young people and their families
- have the confidence to be firm and diplomatic in difficult situations, for example, when dealing with angry parents

- understand the limits of their competence, particularly in stressful situations and be willing to seek help in managing sensitive and complex situations
- be able to demonstrate to trainees how to communicate a diagnosis and prognosis effectively to children, young people and their families
- be able to demonstrate and explain to trainees strategies used to conduct effective consultations with babies, young children, adolescents and their families
- have effective skills in written communications for a range of audiences, for patients and their families, colleagues and other professional organizations
- ensure that spoken and written communications with patients and families are presented in clear, straightforward English, avoiding jargon whenever possible
- ensure that written information in the form of booklets, leaflets, information sheets and websites support verbal communications wherever possible
- ensure that written communications summarise accurately discussions with children, young people and parents or carers, and, to avoid confusion and anxiety, do not include information that was not part of the original discussion
- be able to liaise with parent support and self-help groups when necessary
- be able to prepare a court report as a professional witness and develop the skills to present such material in court
- know how to write reports about alleged abuse of children and young people for social services or the courts
- be able to write reports that explain the condition of a child or young person to non-health personnel working in the courts, social services or education
- be able to use electronic communication media, taking into consideration the principles of confidentiality outlined in the Data Protection Act
- have developed effective professional networks to support clinical practice and other activities, including research, education and management

Section 3 General Clinical Competences

Development

Substantial re-wording or new statements of competence for Level 3 Training

- know the range of patterns of normal development from birth to adulthood
- know and understand the range of children's or young people's psychological and social development, including the normal range and what is outside it
- be able to identify when patterns of development are abnormal and where there may be a risk of abnormality which may only become apparent with time
- know the causes of disability, how disability might affect clinical examination and assessment and be able to contribute to a multi-disciplinary approach to management
- understand the severity of the presentation, taking into account normal development in appropriate domains
- know how to institute further assessment and investigation
- know about different modes of screening and health promotion strategies
- understand the ways in which children's or young person's mental health difficulties may present in infancy, childhood and adolescence
- understand the impact of biological factors, including genetic and cognitive factors, on the mental health of children and young people
- understand the impact of other environmental factors (including violence, trauma, neglect, abuse and disruption, wherever this has occurred) on a child's development, mental health and functioning
- be able to assess the effects of recurrent or chronic illness and its treatment on growth, psycho-social, emotional, physical and sexual development and have strategies to minimize adverse effects

Emotional development

Substantial re-wording or new statements of competence for Level 3 Training

- understand and recognise somatisation disorders and know how to provide initial management and how to access appropriate support
- recognise pointers to fabricated and induced illnesses and know how to provide initial management and how to access available support

- understand the emotional impact of illness and hospitalisation on children, young people and their families and take action to minimize this impact
- understand how a family's, child's or young person's attitude to the problem and services may have a significant impact on the presentation and its management
- recognise the need for specialised input in cases of serious emotional distress or mental illness and ensure their needs are met within local health provision
- understand the emotional dimensions of eating disorders and recognise and initiate treatment
- be able to assess parenting skills and recognise and respond to indications of unsatisfactory or unsafe parenting
- know how to access help in cases where children or young people of different ages might be deprived of opportunities to play and to learn
- know how to manage common behavioural problems

Social development

Substantial re-wording or new statements of competence for Level 3 Training

- be able to recognise and understand the impact of autistic spectrum disorders and other organic disorders on social development

Educational development

Substantial re-wording or new statements of competence for Level 3 Training

- demonstrate, in all aspects of their practice, an understanding, of the vulnerability of a child or young person with learning difficulties

Growth and Nutrition

Substantial re-wording or new statements of competence for Level 3 Training

- know the reasons for faltering growth, including emotional factors and how to investigate appropriately
- understand and assess normal and abnormal pubertal development and its relationship to growth
- understand the environmental factors contributing to obesity and how these might be altered

- be able to recognise feeding problems and work with parents directly to offer simple advice and to treat co-morbid conditions
- know about the principles and methods and indications for nutritional support and common problems that may arise from invasive methods or refeeding
- be able to identify nutritional deficiencies and growth failure which may occur in children and young people who undergo unsupervised dietary modification

Adolescence

Substantial re-wording or new statements of competence for Level 3 Training

- understand what the specific needs of young people are, in terms of their emotional, mental and physical health, and how these are different from those of children
- know the epidemiology of the main causes of morbidity and mortality in young people
- ensure that young people have access to ‘in-patient’, ‘outpatient’ and other medical services that best meet their needs
- understand why young people harm themselves and respond appropriately to actual or threatened episodes of self-harm in adolescents
- understand the consequences of self-harm and be able to work as part of a clinical network in the management of the young person who self-harms
- be able to discuss sexual health issues including basic contraceptive advice and know how to help the young person access appropriate sexual health or genetic advice
- know about national policies concerning the health care of young people, including those which help to reduce teenage pregnancy
- understand the processes of adolescence including experimental behaviours, learning by experience, achieving independence from the family, and the consequences of these on health and illness in young people
- be able to discuss comfortably with young people important health behaviours such as the use of tobacco, alcohol or recreational drugs, and intimacy and sexual activities together with the promotion of appropriate strategies for these in relation to specific conditions such as asthma, diabetes, cystic fibrosis, physical disability

- understand the particular needs of adolescents with regard to their independence and autonomy, education and work, body image and sexual identity, concordance with medication and risk-taking and understand how these factors may be affected in young people with chronic conditions
- be able to support young people in self-management of both acute and chronic disease where they want to, and have an understanding as to how to best help when the young person cannot or does not want to manage this
- be able to discuss the implications of chronic illness or disability for career options
- where appropriate and at a negotiated time, be able to raise and agree management of end-of-life issues with young people and their families and record conclusions in medical notes
- understand issues around transition from paediatric to adult care in adolescents with chronic conditions and disabilities, and be able contribute effectively to transitional care services
- understand and value the roles of members of the multidisciplinary team in the delivery of a transitional care programme

Section 4 **Specialty-specific Competences in General Paediatrics**

This section sets out the competences trainees should acquire in the specialist areas of Paediatrics. They appear in alphabetical order and are grouped in lists and tables. The competences in lists at the beginning of each section apply to all conditions in that specialism. The tables offer detailed reference where specific skills or knowledge may be linked to specific conditions rather than to overall practice in this area. Text in bold indicates new statements for Level 3 Training.

Behavioural paediatrics

Continuing development from the Level 1 document

- know about normal emotional and behavioural development and how it may affect the child and family at different stages.
- be able to look at behaviour as a form of communication and to take this into account when interviewing, examining and assessing children
- know about the effects of substance abuse

Change of wording from the Level 1 document

- have developed an approach to the assessment of behaviour problems that uses observation and information from other sources, such as school, as well as history-taking
- have developed some strategies and skills to support and engage parents of children with emotional or mental health difficulties
- know about the multidisciplinary nature of Child and Adolescent Mental Health (CAMH) services and be able to apply this knowledge in discussion of cases
- be able to recognise signs and symptoms that could indicate serious conditions such as attention deficit hyperactivity disorder (ADHD), autistic spectrum disorders, depression, psychosis
- are able to undertake the initial assessment and management of common causes of admission to hospital due to psychological distress such as self-harm, somatic symptoms of distress and to refer on when appropriate

Substantial re-wording or new statements of competence for Level 2 Training

- know about the use of standardised questionnaires in assessing behaviour
- be able to recognise when behaviour features may indicate an underlying cause and to be able to refer appropriately for further assessment

Substantial re-wording or new statements of competence for Level 3 Training

- **know about the effects of developmental difficulties and physical diseases on behaviour and vice versa and be able to recognise when this occurs**
- **initiate management and effectively engage and contribute to ongoing multi-disciplinary care**
- **be able to manage, and contribute, as part of the multi-disciplinary team, to ongoing management of, common behaviour problems such as temper tantrums, sleep problems, the crying baby, feeding difficulties, oppositional behaviour, enuresis and encopresis, school refusal**

Cardiology

Continuing development from the Level 1 document

- have the knowledge and skills to be able to assess and initiate management of babies and children presenting with cardiological disorders
- know the genetic and environmental factors in the aetiology of congenital heart disease
- be able to formulate a differential diagnosis
- be able to select and interpret appropriate cardiological investigations and know the indications for echocardiography
- understand the life-threatening nature of some of these conditions and when to call for help
- know the possible cardiac complications of other system disorders
- know when referral for specialist paediatric cardiology assessment for further management is appropriate

Change of wording from the Level 1 document

- be able to provide advanced life support and lead the team at a cardiac arrest

Substantial re-wording or new statements of competence for Level 3

Training

- **be able to identify ECG abnormalities**
- **be able to contribute to the local provision of long-term care working with specialty services and networks of cardiac services**
- **be able to lead long-term management of the child's overall health and developmental needs working effectively with the family and other professionals involved**

Acute presentations

The patient presents with	Knowledge and understanding	Skills
Cyanosis	<p>know the normal fetal circulation and transitional changes after birth</p> <p>know the anatomy of the common causes of cyanotic heart disease</p>	<p>be able to differentiate between cardiac and non-cardiac causes of cyanosis</p> <p>be able to initiate emergency management and lead continuing care until appropriate transfer of care occurs</p> <p>be able to describe clinical signs and investigations accurately and effectively with a cardiologist</p> <p>recognise when treatment is urgent</p>
Heart Failure, including cardiac conditions which present with shock	understand the causes of heart failure	be able to initiate appropriate investigations and treatment

Arrhythmia	know the causes of arrhythmias	be able to recognise common dysrhythmias on ECG be able to initiate emergency treatment in arrhythmias such as paroxysmal supraventricular tachycardia
Infective Endocarditis	know when prophylaxis against endocarditis is indicated know the causes of endocarditis	be able to advise parents about prophylaxis against endocarditis be able to recognise the possibility of endocarditis be able to initiate appropriate investigations and treatment

Outpatient based scenarios

The patient presents with:	Knowledge and understanding	Skills
Heart murmur	know the causes of common heart murmurs and the haemodynamic reasons for them know about the effects of heart disease at school	be able to interpret correctly heart sounds and added sounds be able to identify an innocent cardiac murmur be able to advise families appropriately about the effects of heart disease at school
Hypertension	know and understand the causes of hypertension in children	be able to measure and interpret correctly blood pressure measurements at different ages recognise the importance of examining femoral pulses in all children
Palpitations	know the cardiac and non-cardiac causes of palpitations	be able to initiate appropriate investigations
Syncope	know the cardiac causes of syncope	be able to differentiate syncope from seizures be able to initiate appropriate investigations including ECG analysis

Child Protection and Children in Special Circumstances (Social Paediatrics)

Continuing development from the Level 1 document

- understand concepts and factors underpinning child protection work
- recognise where families are distressed and need help to prevent child abuse
- understand the emotional impact of abuse on the child, family and on professionals
- keep accurate records of all findings and communications with the child, family members, and all other professionals
- be able to record clearly the results of an examination of a baby, child or adolescent using body charts
- recognise the importance of noting all observations of the child's demeanour and interactions with parents or carers
- understand the need to initiate a safe response where abuse is suspected, while treating the family with respect and courtesy at all times
- understand the ways in which their own beliefs, experience and attitudes might influence professional involvement in child protection work
- understand the effects of family composition, socio-economic factors and poverty on child health
- have an understanding of how the different disciplines and agencies collaborate locally with respect to looked-after children, children with disabilities and over child protection issues
- know about the resources that may be available from health and other agencies, including the voluntary sector, to support families in need
- be aware of child health exploitation issues including child prostitution, child labour and children in combat
- be aware of the effects of armed conflict on child health
- be aware of the millennium development goals
- be aware of the implications of sustainable development in low income countries

Change of wording from the Level 1 document

- be familiar with the different categories of abuse and recognise that they may occur together: physical, emotional, sexual, neglect, fabrication or falsification/induction of illness in a child
- recognise features in the presentation where child protection may be an issue, for example where there are patterns of injury, delay in presentation, inconsistencies in the history and know how to act on them
- be able to recognise and assess increased needs in children who are fostered, adopted or in residential care
- be able to assess and initiate the management of the child in need of protection
- know the local guidelines and national guidance and follow the procedures for cases where child abuse is suspected
- know how to access the Child Protection register and understand its role and its limitations
- be familiar with legal processes, legislation, the role of the family court, guidelines and recommendations, such as those in the Laming Report (2003) relating to child protection and children in need
- know how to access and understand the roles of allied health professionals and other agencies in the support of children and families
- understand the work of the World Health Organisation and UNICEF

Substantial re-wording or new statements of competence for Level 2 Training

- have attended a training course in child protection
- be alert to the diversity of physical signs and symptoms that might indicate child abuse
- be able to conduct an assessment for physical abuse, recording findings and come to a conclusion about the nature of injuries under supervision
- know what to do if a child discloses allegations of abuse
- know where help with management can be obtained and understand the pathways to ensure follow-up
- understand the role of named and designated professionals
- understand the difference between civil and criminal proceedings

- understand the difference between a medical report and a witness statement for the police and be able to produce either
- be able to compile and write, under supervision, the range of reports required in Child Protection work including police statements, medical reports for social services and court reports
- be able to contribute to case conferences, strategy meetings or court hearings under supervision
- be able to appear as a professional witness in civil or criminal proceedings
- be able to undertake and document a comprehensive medical assessment of a child looked after by the local authority
- be aware of the role of the Medical Adviser on adoption, of the local adoption panel and know how adoption medical reports are compiled

Acute presentations

The child presents with:	Knowledge and understanding	Skills
Physical injury	<p>know how to assess in relation to history, developmental stage and ability</p> <p>know appropriate investigations when child abuse is a possibility, for example, skeletal survey when appropriate</p> <p>be aware of the current evidence on interpreting injuries such as bruising</p>	<p>be able to initiate appropriate investigations</p> <p>be able to recognise new and old fractures on an X-ray</p> <p>be able to initiate a multi-disciplinary investigation in consultation with a more experienced colleague</p>
Head injury	<p>know about acute and chronic presentations of subdural haemorrhage</p> <p>know that this may cause symptoms mistaken as having a metabolic or infective cause in an infant</p> <p>know the appropriate investigations and involvement of other disciplines, for example</p>	<p>be able to perform fundoscopy and recognise retinal haemorrhage</p> <p>be able to initiate emergency management and urgent investigations</p> <p>be able to co-operate in multi-disciplinary and multi-agency working</p>

	<p>ophthalmology or radiology</p> <p>know that retinal haemorrhages may be difficult to detect and when an ophthalmologist should be involved</p>	
Vaginal or rectal bleeding	<p>know that sexual abuse forms part of the differential diagnosis</p> <p>know when an expert genital examination is needed and the role of colposcopy as part of that</p> <p>know about the risk of acquired sexually transmitted infections</p>	be able to refer to a colleague experienced in examination for sexual abuse
Self-harm	<p>recognise self-harm as an expression of distress, acute or long-term</p> <p>recognise repeated self-harm as indicating serious emotional distress</p>	be able to refer to the CAMHS team
Apnoeic episodes as an infant	<p>be aware of this as a possible presentation of imposed airway obstruction and know the indicators that this may be the case</p> <p>understand the life-threatening nature of imposed airway obstruction</p>	

Outpatient presentations

The child presents with:	Knowledge and understanding	Skills
Faltering growth	be aware of the high incidence of a non-organic cause	be able to instigate appropriate investigations
Soiling/wetting	know that this can be a presentation of emotional abuse or neglect	be able, with appropriate history and observations, to elucidate factors within

	<p>sometimes in association with other forms of abuse, including sexual abuse</p> <p>know the other physical, psychological or maturational problems leading to soiling, wetting</p>	<p>the child's life that may be causing these problems</p>
Vaginal discharge	<p>know that this may be a presentation of sexual abuse</p> <p>know when an expert genital examination is needed and the role of colposcopy as part of that</p> <p>know about the many other causes of vaginal discharge</p>	<p>be able to manage common causes of vulvitis and vaginal discharge</p> <p>know when to consult with a senior colleague experienced in sexual abuse when there is any question of this</p>
Behavioural change	<p>know the association of this with abuse, including emotional abuse, neglect, and sexual abuse</p> <p>know about behavioural change due to progressive CNS disease</p>	<p>be able to take a history to elucidate social and emotional factors that may be involved</p> <p>be able to seek the help of a senior colleague</p>
Repeated or bizarre physical symptoms	<p>know the possible signs of factitious and induced illness</p> <p>know the pathways to gather medical, educational and social information on the child</p>	

Child Public Health

Continuing development from the Level 1 document

- know about the organisation of NHS management structures and service networks
- know about national and local education and social services
- know about current government policies which relate to children
- be aware of the effect of non-health policies on child health
- be aware of the effect of the media on public perception of health care issues

- understand the principles of public health needs assessment
- know the local, national and international structures for healthcare
- understand the role of the paediatrician in advocating for children at individual, community, national and international levels

Change of wording from the Level 1 document

- understand the key determinants of child health and well-being
- show that they understand, in their practice, how healthcare services relate to education and social services
- know about available outcome measures which are used to monitor the health of a child population and how they might be used to guide and monitor service delivery
- understand the indices of social deprivation
- understand and be able to contribute to health promotion and health education and be aware of current health promotion activities carried out in the community
- show that they understand, in their practice, the causes of outbreaks of infection, its investigation and control

Substantial re-wording or new statements of competence for Level 2 Training

- understand the principles of immunisation programmes, national and local structures that deliver immunisation programmes, and how they might be monitored and audited
- **use principles of evaluation, audit, research and development and standard-setting in improving quality**
- be able to conduct an audit of screening, health promotion or service delivery with relevant colleagues

Topic	Knowledge and understanding	Skills
Screening and surveillance	<p>know about screening and surveillance programmes, including their implementation and evaluation</p> <p>know about conditions currently screened for</p> <p>understand the ethical dilemmas posed by screening</p>	<p>be able to explain specific screening issues to parents and organise these tests as necessary</p> <p>be able to explain positive and false positive results to parents and respond appropriately to their concerns</p> <p>be able to conduct developmental examinations at different ages</p> <p>be able to refer appropriately when required</p>
Health promotion	<p>understand the importance of evidence to support health promotion activities</p> <p>know the role of health promotion programmes, for example, to prevent dental decay, smoking, accidents, obesity, sudden infant death</p>	<p>be able to incorporate health promotion activities in their practice</p> <p>be able to advise parents on avoiding risks for children</p> <p>include health promotion messages during the consultation where appropriate</p> <p>be able to contribute to health promotion programmes</p>
Public Health and epidemiology	<p>understand population statistics and know how they might be used in service development</p> <p>understand the role of public health doctors in commissioning NHS services</p> <p>understand good study design</p>	<p>know the principles of how to conduct population studies</p> <p>be able to evaluate evidence and critique clinical research papers</p>

<p>Accidents and injuries</p>	<p>understand the epidemiology of injuries in children and young people</p> <p>know about effective injury prevention initiatives</p> <p>know about the sequelae of injury</p> <p>know about rehabilitation</p>	<p>be able to recognise when injury may be non-accidental and to assess that injury</p> <p>be able to recognise and treat accidental ingestion and deliberate self-poisoning</p> <p>be able to advise parents on injury prevention and contribute to local injury prevention programmes</p>
<p>Immunisation</p>	<p>understand passive and active immunisation</p> <p>understand the principles and the rationale behind the national immunisation policy for children in Britain</p> <p>know about immunisation programmes and schedules in the UK and elsewhere</p> <p>understand the role of the Immunisation Coordinator</p> <p>know the indications, contraindications and complications of routine and specific childhood immunisations</p> <p>understand the reasons for immunisation failures</p>	<p>be able to advise parents and professionals about commonly referred immunisation problems</p> <p>be able to contribute to immunisation programmes</p> <p>know where and from whom to seek advice for the most complex histories about immunisations</p>

Dermatology

Continuing development from the Level 1 document

- be able to describe accurately any rash
- have the knowledge and skills to be able to recognise, investigate and manage common skin complaints
- know about the cutaneous and mucosal manifestations of systemic disease
- recognise the serious nature of some skin disorders or their associated conditions and know when to ask for help
- know about chronic skin rashes

- understand the principles of therapy for skin complaints
- understand the impact of severe dermatological problems on children
- know when consultation with other specialties is appropriate
- know the indications for and the procedure involved in skin biopsy

Change of wording from the Level 1 document

- understand the different potencies of topical steroids and of their side effects
- know the common causes of hair loss and hypertrichosis

Substantial re-wording or new statements of competence for Level 3 Training

- **be able to contribute to the overall care of a child with skin disease and understand the difficulties of adhering to treatment regimes**

Acute presentations

The patient presents with	Knowledge and understanding	Skills
Skin failure e.g. toxic epidermal necrolysis, staphylococcal scalded skin syndrome and epidermolysis bullosa	<p>know the features and management of staphylococcal scalded skin syndrome</p> <p>be aware of the rarer causes of skin failure</p>	<p>be able to assess and to start initial treatment promptly</p> <p>recognise when to consult dermatology and ophthalmology specialists</p>
Skin infections	<p>know the causal bacteria, features, complications and management of cellulitis including periorbital cellulitis</p>	<p>recognise when to consult ophthalmology and ENT specialists</p> <p>recognise and be able to treat scabies, pediculoses, and common viral and fungal skin infections</p> <p>recognise the features of and manage infected eczema and eczema herpeticum</p>

Cutaneous drug reactions	be aware of the different patterns of drug reaction and of the common precipitants	be able to assess mucosal involvement recognise when to consult dermatology and ophthalmology specialists recognise serious drug reactions, for example Stevens-Johnson syndrome
Erythema nodosum	know the causes of erythema nodosum	recognise the features in the presentation which suggest significant pathology and which indicate a particular diagnosis
Erythematous rash and fever	know the causes of fever and an erythematous rash with or without desquamation	be able to recognise and institute treatment of Kawasaki syndrome be aware of complications and know when to refer, for example, to a cardiologist recognise and initiate management of rare but serious causes, for example toxic shock syndrome

Outpatient presentations

The patient presents with	Knowledge and understanding	Skills
Eczema and seborrheic dermatitis	know the common treatments for eczema and the reasons for treatment failure	be able to manage mild eczema and seborrheic dermatitis be able to advise parents about these conditions

Diabetes and Endocrinology

Continuing development from the Level 1 document

- be able to measure children accurately and to assess their growth using appropriate growth charts and taking into account parental stature and pubertal status

- be able to assess accurately pubertal stages of development
- know about changes to insulin and steroid therapy in children with diabetes and hypoadrenalism during acute illness or perioperatively
- understand the endocrine complications of other diseases

Substantial re-wording or new statements of competence for Level 3

Training

- have the knowledge and skills to be able to assess and initiate management of patients presenting with diabetes, growth or endocrine presentations in inpatient and outpatient settings and provide continuing care in association with specialists or as part of networks as appropriate

Acute presentations

The patient presents with:	Knowledge and understanding	Skills
A child presents 'well' with diabetes mellitus	know the pathophysiology of diabetes mellitus recognise the early features of this presentation know the principles of diabetes management including commonly used insulin regimens know about the long term complications of diabetes and about ways to reduce the risks of these occurring	be able to explain this condition to parents and initiate treatment be able to liaise with the children's diabetes team be able to give basic advice about diet and exercise
Diabetic ketoacidosis	understand the pathophysiology of diabetic ketoacidosis know how to treat and monitor progress	be able to recognise the clinical features of this condition recognise potential complications including cerebral oedema be able to lead the team when initiating resuscitation and early treatment be able to manage ongoing treatment safely within guidelines

Hypoglycaemia	<p>know the causes, complications and treatment in the neonatal period and beyond</p> <p>know that blood glucose is an urgent investigation in patients with impaired conscious level</p> <p>be aware of the clinical features which would suggest hypopituitarism or adrenal insufficiency</p> <p>know when to consider rare causes of hypoglycaemia and what investigations to perform during the hypoglycaemic episode</p>	<p>be able to take relevant investigations required for the confirmation of cause</p> <p>be able to assess whether any change to insulin treatment is needed to prevent recurrence in diabetic patients</p> <p>be able to treat hypoglycaemia safely and effectively with intravenous glucose or glucagon where appropriate</p> <p>recognise the need to inform the diabetes team of serious hypoglycaemia in their patients</p>
Neonatal thyrotoxicosis	know the cause of this condition and its natural history	recognise this presentation and the need for urgent treatment
Ambiguous genitalia	<p>be aware of the causes of this presentation</p> <p>understand the features of congenital adrenal hyperplasia and its early management</p>	<p>recognise the extreme sensitivity of this presentation and of the need to seek urgent help from specialist colleagues with regard to management and counselling parents</p> <p>be able to give appropriate information to parents</p>

Outpatient presentations

The patient presents with:	Knowledge and understanding	Skills
<p>Short and tall stature</p> <p>Abnormal rates of growth</p>	<p>know the causes of short stature or slow growth and the characteristics of these conditions</p> <p>know when short stature needs to be investigated</p>	<p>be able to explain to patients and parents non serious causes of short stature e.g. genetic short stature, constitutional delay and hypothyroidism</p>

	<p>understand and know the rationale behind the baseline and subsequent investigations</p> <p>be aware of treatments that are available for pathological short stature</p> <p>know about the causes of tall stature</p>	<p>recognise the need to rule out Turner's syndrome as a cause of short stature in girls</p>
Delayed and early puberty	<p>know the causes and possible investigation of early and late puberty</p>	<p>recognise when the cause may be pathological rather than physiological</p>
Goitre and thyroid disorders	<p>know the causes of congenital and acquired hypothyroidism</p> <p>know about the national screening programme for hypothyroidism</p> <p>understand the need for precise treatment and monitoring during infancy and early childhood</p> <p>know the associations of auto-immune diseases and of trisomy 21</p>	<p>be able to assess thyroid status</p> <p>be able to interpret thyroid function tests on and off treatment</p> <p>be able to recognise thyrotoxicosis</p>
Polyuria and polydipsia	<p>know the causes of this presentation including diabetes mellitus and insipidus</p> <p>know the dangers of water deprivation</p>	<p>be able to select patients who may require investigation and initiate this</p> <p>be able to advise parents about habit drinking</p>
Obesity	<p>understand the causes of obesity</p> <p>understand the long term complications</p> <p>understand interventional strategies that are involved in weight reduction</p> <p>be aware that body mass index charts may be a useful therapeutic tool</p> <p>know about the presentation of Type 2 diabetes during childhood</p>	<p>recognise features in the presentation which suggest serious pathology</p> <p>be able to use body mass index charts to diagnose obesity</p> <p>be able to explain the long-term complications to parents</p>

Gastroenterology, Hepatology and Nutrition

- have the knowledge and skills to be able to assess and initiate management of patients presenting with common gastroenterological problems in acute and outpatient settings
- **be able to lead or contribute to local care in association with specialists or as part of a network as appropriate**

Acute presentations

The patient presents with:	Knowledge and understanding	Skills
Acute abdominal pain	know the causes of acute abdominal pain	<p>recognise when to request a surgical opinion</p> <p>recognise conditions which require urgent intervention, for example, intussusception</p> <p>recognise the need to consider acute appendicitis in very young children</p> <p>recognise signs of pain in an infant or small child</p>
Acute diarrhoea and/or vomiting	<p>know the causes of the symptoms of acute diarrhoea and vomiting</p> <p>understand the scientific principles for oral and intravenous fluid therapy</p>	<p>recognise features in the presentation which suggest serious pathology e.g. haemolytic uraemic syndrome, appendicitis, intestinal obstruction</p> <p>implement local isolation policies</p>
Jaundice	know the causes of neonatal and childhood jaundice	investigate appropriately and know when to refer to specialist services
Upper and lower gastrointestinal bleeding	<p>know the causes of upper and lower gastrointestinal bleeding</p> <p>understand the potentially life-threatening nature of</p>	<p>recognise features in the presentation which suggest serious pathology</p> <p>be able to assess the severity of the condition</p> <p>institute appropriate</p>

	this presentation	emergency treatment and lead continuing care until appropriate transfer occurs
Abdominal distension	know the causes of abdominal distension	initiate investigation and seek surgical opinion when required
Acute liver failure	know the causes of acute liver failure know the management of Paracetamol poisoning	be able to assess the severity and complications of this condition be able to initiate appropriate resuscitation, liaise early with the paediatric liver unit and continue care until transfer occurs
Congenital abnormalities	know the presenting features of congenital abnormalities including tracheo-oesophageal fistula, malrotation, bowel atresias, Hirschsprungs disease, abdominal wall defects, diaphragmatic hernia be familiar with potential associated abnormalities know when antenatal transfer to a Neonatal Surgical Centre should be considered	institute appropriate emergency treatment, and be able to assess the fitness of the baby and the need to transfer to a specialist centre recognise when the bowel might be compromised recognise the need to liaise with surgeons and when this is urgent
Gastro-oesophageal reflux and oesophagitis	know the range of presentations of gastro-oesophageal reflux and oesophagitis in otherwise well infants and children and also in disabled children	recognise the range of signs and symptoms associated with gastro-oesophageal reflux and oesophagitis manage mild and moderate gastro-oesophageal reflux and recognise when to refer

Outpatient presentations

The patient presents with	Knowledge and understanding	Skills
Chronic or recurrent abdominal pain	<p>know the possible biological, psychological and social contributing factors in chronic or recurrent abdominal pain</p> <p>know which features suggest that reassurance rather than investigation is needed</p>	<p>recognise features in the presentation that suggest the importance of different aetiologies</p> <p>be able to manage most cases</p> <p>be able to refer appropriately to other services, for example Psychology when required</p> <p>consider when there might be child protection issues</p>
Chronic diarrhoea and/or vomiting	<p>know the causes of chronic diarrhoea and/or vomiting</p> <p>be aware of the characteristics of bulimia</p>	<p>be able to initiate investigations and manage common causes</p>
Constipation with or without soiling	<p>understand the relevance of predisposing conditions, e.g. hypothyroidism, neurodisability, psychosocial problems</p>	<p>be able to follow local and national guidelines for management</p> <p>manage constipation with and without soiling</p> <p>recognise when to liaise with specialist paediatricians, specialist nurses, psychologists and psychiatrists</p>
Dysphagia	<p>know the causes of dysphagia</p>	<p>be able to distinguish between organic and functional dysphagia</p>

Malabsorption	<p>know the causes of malabsorption including coeliac disease and cystic fibrosis and its consequences</p> <p>understand the principles of treatment of the different types of malabsorption</p>	<p>be able to explain and initiate investigations, nutritional assessment, dietary principles and liaise appropriately with the dietician</p> <p>be able to manage and co-ordinate care</p>
Malnutrition	<p>know the causes of malnutrition including organic and non-organic causes</p> <p>be familiar with the consequences of malnutrition</p> <p>know the principles of enteral and parenteral nutrition support</p>	<p>be able to assess nutritional status</p> <p>be able to initiate investigations to establish the diagnosis and detect nutritional deficiencies and initiate management with dietetic support</p>
Iron deficiency anaemia	<p>know the causes of iron deficiency anaemia including poor diet, bleeding, malabsorption</p> <p>understand factors which predispose to dietary iron deficiency anaemia</p> <p>be aware of the consequences of the condition</p>	<p>be able to manage iron deficiency anaemia</p> <p>be able to counsel parents about preventing dietary iron deficiency</p>

Genetics and Dysmorphology

Continuing development from the Level 1 document

- understand the scientific basis of chromosomal disorders and inheritance
- be able to construct a family tree and interpret common patterns of inheritance
- understand the basics of molecular genetics

- know the basis of prenatal screening and diagnosis, the conditions for which they are used and the ethical dilemmas they pose
- have an awareness of the use and non-directive nature of genetic counselling
- understand the risks of and cultural issues posed by consanguinity
- have an understanding of the ethical dilemmas and the implications of pre-symptomatic or carrier testing in children
- have experience of interviews where diagnoses of serious conditions are communicated to parents
- have experience of how geneticists work with fetal medicine specialists, neonatologists and paediatric surgeons
- be able to recognise features suggesting dysmorphic or genetic syndromes and to identify associated anomalies
- be aware of environmental factors which may affect pre-natal development, for example alcohol and drugs

Change of wording from the Level 1 document

- recognise the features of common chromosome disorders
- be able to recognise and investigate common malformation or deformation syndromes and to identify associated anomalies

Substantial re-wording or new statements of competence for Level 2 Training

- be able to follow local and national protocols for the management of genetic disorders
- **take the lead in establishing and presenting the diagnosis to parents**
- **be able to give appropriate information to parents whilst awaiting investigations and opinions from colleagues**
- **be able to respond appropriately when the diagnosis of Down's syndrome is suspected at delivery or on the postnatal wards and take responsibility for breaking the news to parents**
- **be able to plan transitional care and referral of the young person to clinical genetics service at an appropriate time**

Haematology and Oncology

Continuing development from the Level 1 document

- be able to initiate management in common presentations of non-malignant disorders
- know the principles of cancer treatment
- be familiar with the indications and complications of bone marrow transplantation
- know about national and local blood transfusion policies and procedures

Change of wording from the Level 1 document

- have the knowledge and skills to be able to assess and initiate investigation of patients presenting with haematological or oncological presentations in inpatient and outpatient settings
- work effectively with
- specialist nurses and members of palliative care teams
- know the short- and long-term side effects of chemotherapy and radiotherapy and be able to explain the common ones

Substantial re-wording or new statements of competence for Level 2 Training

- know about local policies for intrathecal cytotoxic therapy

Acute and outpatient presentations

The patient presents with	Knowledge and understanding	Skills
Anaemia	<p>know and understand the causes of anaemia</p> <p>understand the predisposing factors and consequences of iron deficiency anaemia</p> <p>understand the hereditary basis and clinical features of sickle cell anaemia and the thalassaemias</p> <p>understand the long-term implications for families</p>	<p>be able to investigate anaemia and recognise serious underlying pathology</p> <p>be able to manage iron deficiency anaemia</p> <p>know how to counsel parents about hereditary anaemias</p> <p>be able to explain screening for the thalassaemia or sickle cell trait</p>

	<p>know about the potential consequences of haemolytic anaemia</p>	<p>be able to manage sickle cell crisis, including safe administration of fluid and analgesia</p>
<p>Polycythaemia</p>	<p>know the causes and treatment of polycythaemia in the new-born period</p> <p>understand why children with cyanotic congenital heart disease are vulnerable to polycythaemia</p>	<p>be able to undertake partial plasma exchange transfusion in a new-born infant</p>
<p>Neutropaenia</p>	<p>understand the significance of fever in a neutropaenic patient</p> <p>understand the differing risks of neutropaenia in different conditions and treatment regimens</p>	<p>be able to manage febrile neutropaenia, following local network guidelines and recognising when to liaise with specialist services</p>
<p>Purpura and bruising</p>	<p>know the causes of purpura and bruising</p> <p>understand immune mechanisms in vasculitis and in allo- and auto-immune thrombocytopenia</p>	<p>recognise features in the presentation which suggest serious pathology or child abuse</p> <p>be able to explain Henoch-Schonlein purpura to parents and manage patients</p> <p>be aware of situations where specialist referral is appropriate</p> <p>be able to explain idiopathic thrombocytopenic purpura (ITP) to parents including when precautions and treatment are necessary and manage continuing care</p> <p>be able to manage acute bleeding in haemophilia and von Willibrands disease</p> <p>use genetic counselling services appropriately</p>
<p>Other haemorrhage due to coagulopathy</p>	<p>know the causes and presentations of haemorrhagic disease of the newborn</p> <p>understand the hereditary basis of haemophilia and other coagulation disorders</p>	<p>be able to discuss the need for prophylactic Vitamin K with parents</p> <p>be able to recognise and treat haemarthrosis in a</p>

		patient with haemophilia and be aware of the need to treat urgently, with appropriate advice
Leukaemia	<p>know the different types of leukaemia and their prognoses</p> <p>recognise and understand the clinical manifestations of leukaemia</p>	<p>be able to recognise and initiate investigations to diagnose leukaemia</p> <p>be able to recognise the immediate dangers of leukemia to the newly presenting child</p> <p>be able to follow local and national protocols in treating leukaemia and associated infections</p>
Lymphomas	<p>know the clinical features of Hodgkin's disease and non-Hodgkin's lymphoma</p> <p>know the features which suggest lymphadenopathy may be malignant and how it might be investigated</p>	be aware of staging and protocols for treatment
Other solid tumours	<p>know about the clinical presentation, treatment and prognosis of nephroblastoma and neuroblastoma</p> <p>be aware of the clinical features and investigation findings of other solid tumours</p>	<p>be aware of staging and protocols for treatment</p> <p>be able to recognise the presenting features of these tumours</p>
Transfusion	<p>understand the risks of administering blood products</p> <p>know the indications for irradiated blood products</p> <p>recognise the concerns of some groups in society in relation to blood products</p>	<p>follow transfusion procedures correctly</p> <p>explain the risks and benefits</p> <p>order blood products appropriately</p> <p>respond to objections to transfusion appropriately</p> <p>manage transfusion reaction</p>

Immunology, Infectious Disease and Allergy

Continuing development from the Level 1 document

- have the knowledge and skills to be able to assess and initiate management of patients presenting with infectious disease and allergic conditions
- know and understand host defence mechanisms and their pattern of development
- know the causes of vulnerability to infection
- know and understand the classification of infectious agents
- know the mechanisms of maternal to fetal transmission of infection and the clinical manifestations of these infections and how to prevent them
- know the epidemiology, pathology and natural history of common infections of the fetus, newborn, and children in Britain and important worldwide infections, for example TB, HIV, hepatitis B, malaria, polio
- be able to follow agreed local or national guidelines on notification of infectious diseases
- understand the mechanisms of drug resistance
- understand the pathophysiology and the principles of treatment of allergic and auto-immune disorders
- understand the classification of immunodeficiencies
- know the clinical manifestations of the different types of immunodeficiencies
- know the conditions and treatments which result in secondary immunodeficiencies

Change of wording from the Level 1 document

- recognise indications for and be able to prescribe appropriate first line common anti-microbials
- be able to prescribe antimicrobial prophylaxis appropriately
- apply principles of infection control
- take responsibility for notifying communicable diseases

Substantial re-wording or new statements of competence for Level 2 Training

- be able to use the antibiotic policies and understand the development of resistant organisms

- be able to assess and institute appropriate management of infection in an immuno-compromised child

Acute presentations

The patient presents with:	Knowledge and understanding	Skills
Septic shock	<p>understand the pathophysiology of septic shock and its complications</p> <p>know local and nationally agreed guidelines for the management of septic shock including meningococcal disease</p> <p>be aware of the differential diagnosis of septic shock</p>	<p>be able to initiate and lead immediate management of early and advanced features of septic shock</p> <p>be able to lead the team when initiating resuscitation and early treatment</p> <p>be able to liaise effectively with anaesthetic and PICU staff and manage patient until transfer team takes over</p>
Fever of unknown origin	<p>know the possible causes of fever of unknown origin</p> <p>understand aspects of social history that are relevant to explore</p>	<p>recognise features in the presentation which suggest serious or unusual pathology and be able to initiate investigations to establish cause</p>
Anaphylaxis	<p>know the management of anaphylaxis guidelines</p>	<p>be able to lead the team to provide advanced life support</p> <p>be able to liaise effectively with anaesthetic and PICU staff</p> <p>be able to advise on the future risk of anaphylaxis and facilitate an appropriate anaphylaxis management plan by liaising with community teams</p>

Outpatient presentations

The patient presents with:	Knowledge and understanding	Skills
Recurrent infections	understand why children suffer recurrent infections and know which conditions predispose to infection	recognise and investigate appropriately features in the presentation which suggest serious underlying pathology
Food or other allergies	<p>know the foods that can trigger IgE - mediated reactions</p> <p>understand the investigations that are available and their limitations</p> <p>know the features of cows' milk allergy and its management</p> <p>understand the mechanisms of IgE and non IgE mediated food allergy, food intolerance due to pharmacological effects of food and food intolerance due to enzyme deficiencies</p>	<p>recognise the potential serious nature of food allergy</p> <p>advise on the appropriate use of adrenalin</p> <p>be able to distinguish allergy from intolerance and be able explain to parents</p> <p>be able to manage the care with appropriate dietetic support</p>

Metabolic medicine

Continuing development from the Level 1 document

- know the appropriate screening investigations that should be performed when a metabolic disorder is suspected
- know further investigations that should be performed in order to establish a diagnosis of a metabolic disorder
- be able to interpret commonly used investigations and understand how these differentiate between metabolic disorders including those that result in cot death
- know about the common biochemical findings in an acutely ill newborn or child presenting with metabolic disease, including hypoglycaemia, hyperammonaemia or metabolic acidosis

- understand when it is appropriate to investigate, and which investigations to perform, in a neonate or child with visceromegaly
- know the causes of metabolic bone disease and investigations to differentiate between the causes
- know when it is appropriate to consider porphyria in a child presenting with abdominal pain
- understand the principles of dietary, vitamin and pharmacological treatment of metabolic disorders
- be aware of those metabolic disorders which are vitamin responsive or responsive to pharmacological treatment
- know about the metabolic disorders which may respond to enzyme therapy or bone marrow transplantation
- know the routine neonatal screening tests for metabolic disease and be able to explain them to parents
- know the inheritance patterns of common genetically determined metabolic disorders
- know about the educational and social implications of metabolic disorders and the importance of organising support in the community for special diets and other risks

Change of wording from the Level 1 document

- recognize and be able to manage the clinical and biochemical features of electrolyte and acid base disturbances
- know the common clinical presentations and principles of management of metabolic disease including encephalopathy, neurodevelopmental regression, muscle weakness, visceromegaly and faltering growth
- be able to initiate metabolic investigations in neonates and children and in urgent situations

Substantial re-wording or new statement of competence for Level 2 Training

- know what samples must be taken in metabolic investigations at the time of presentation and the importance of liaison with laboratories to ensure use of the appropriate container, handling and storage

- know which metabolic disorders are associated with learning difficulties and arrange timely referral for those at risk

Substantial re-wording or new statements of competence for Level 3 Training

- **be able to lead / contribute to the overall care of the child, liaising with specialty services, the dietician and other services as necessary**

Musculo-skeletal medicine

Continuing development from the Level 1 document

- have the knowledge and skills to be able to assess and initiate management of patients presenting with musculo-skeletal problems
- know the differential diagnosis of inflammatory, non-inflammatory and idiopathic cause of musculoskeletal symptoms
- take an appropriate history, musculoskeletal examination and assessment
- recognise when to request the opinion of paediatric rheumatologists or orthopaedic surgeons
- recognise features in the presentation which suggest serious pathology e.g. inflammation, malignancy, infection and vasculitis
- recognise features in the presentation or investigation findings which suggest physical abuse, emotional abuse and neglect
- understand the role of other professionals involved in the care of children with musculo-skeletal conditions
- be aware of the complications of immunosuppressive treatment
- understand the disease associations of rheumatological conditions, in particular juvenile arthritis and eye disease

Change of wording from the Level 1 document

- be aware of the spectrum of conditions and treatments that can lead to musculo-skeletal problems, such as kyphosis or scoliosis or bone pain

Substantial re-wording or new statement of competence for Level 2 Training

- be aware of rare congenital bone conditions and their possible presentations

- know when radiological appearances are abnormal
- understand investigations that are helpful in establishing a differential diagnosis

Substantial re-wording or new statements of competence for Level 3 Training

- **recognise the presentation of both chronic fatigue syndrome and generalised idiopathic pain syndromes and contribute to the long-term management in line with national guidelines**

Acute presentations

The patient presents with	Knowledge and understanding	Skills
Joint swelling	know the causes of joint swelling be aware of indications for joint aspiration be able to initiate investigations	identify joint swelling on clinical examination
Joint or bone pain	know the causes of joint or bone pain know patterns of referred pain	be able to perform a systematic musculo-skeletal examination and recognise when referral to ophthalmologist, rheumatologist or orthopaedic surgeon is appropriate be able to distinguish between bone and joint pathology
Limp	know the differential diagnosis of a limp	begin to develop intuitive skills to recognise possible serious physical or psychological conditions

Outpatient presentations

The patient presents with:	Knowledge and understanding	Skills
Limb pains	<p>know the differential diagnosis of limb pains</p> <p>be aware of hypermobility and rickets</p>	<p>be able to distinguish between non-serious causes and serious pathology and manage each appropriately</p> <p>be able to recognize unexplained illness behaviour and pain syndromes</p> <p>be able to assess joint laxity</p>
Back pain	<p>be aware of serious causes of back pain</p> <p>understand the investigations that may clarify the diagnosis</p>	<p>be able to assess clinically whether there is likely to be a serious underlying condition</p> <p>be able to initiate appropriate investigations and referral for a neuro-surgical or orthopaedic opinion</p>
Bow legs and knock knees	<p>know the range of normality at different ages</p> <p>be aware of pathological causes of these presentations</p> <p>know the aetiology, predisposing factors and presentation of rickets</p>	<p>know how to give appropriate advice about these conditions</p> <p>be able to recognise the radiological signs of rickets</p>
Torticollis	<p>know the common causes of torticollis</p>	<p>know when to refer simple torticollis in an infant to a physiotherapist</p> <p>be able to recognise serious causes of torticollis including posterior fossa tumour, atlanto-axial instability and juvenile idiopathic arthritis</p>

Inequality of limb length	be aware of the causes of unequal limb length and normal variation and know the consequences of inequality of limb length in the growing child	know how to measure limb length be able to assess scoliosis
Multi-system disease	recognise the features which suggest systemic onset of juvenile idiopathic arthritis know the differential diagnosis of inflammatory or infective causes of multi-system disease	

Neonatology

Continuing development from the Level 1 document

- be able to examine the newborn baby appropriately and with sensitivity
- be able to perform an accurate assessment of the baby at birth
- know about the retinopathy of prematurity and its prevention and treatment

Change of wording from the Level 1 document

- be able to recognise and manage common disorders
- have the knowledge and skills to be able to assess and manage babies presenting in the neonatal period with problems (in acute, postnatal ward and outpatient settings)
- know and be able to describe the effects of antenatal and perinatal events on outcome
- know and be able to describe the pathophysiology of the effects of prematurity
- be able to initiate diagnostic tests for common disorders and to interpret and explain results to parents
- be able to perform a reliable assessment of fluid status and adjust fluid management as needed
- understand the principles of parenteral nutrition and be able to prescribe safely
- be skilled in practising and be able to teach basic practical procedures

- understand the implications for families of babies with neonatal problems and begin to support them
- be able to communicate sympathetically with parents and have experience of strategies for dealing with their distress or anger
- be able to describe the long-term sequelae of prematurity and recognise those at risk
- be able to initiate and lead advanced resuscitation when required
- be able to prescribe for newborn babies and breast-feeding mothers

Substantial re-wording or new statement of competence for Level 2 Training

- have successfully completed a neonatal life support course
- usually be able to obtain appropriate arterial and venous access
- understand the principles and importance of nutrition in the neonatal period including assessment of nutritional status, the steps needed to establish breast-feeding, and nutritional supplementation
- be able to apply clinical reasoning when selecting tests and be able to understand the results sufficiently well to be able to explain them to parents and members of the multi-disciplinary team
- be able to decide on appropriate referrals for transfer to other units, communicate effectively with all involved and maintain care as safely as possible until transfer team takes over
- know how to interpret radiological investigations including the basic features of cranial ultrasound and discuss basic findings with parents
- know how to refer appropriately to community services before discharge and begin to participate in the follow up of those at risk
- know about follow-up programmes for those at risk.
- be able to describe the ethical issues relating to neo-natal intensive care

Substantial re-wording or new statements of competence for Level 3

Training

- **understand the principles of mechanical ventilation and be able to initiate and maintain ventilatory support**
- **recognise the life-threatening nature of some of these situations, be able to lead the management and recognise when additional support is needed**
- **know and follow legal and ethical guidelines and be able to discuss ethical issues with the family and multi-disciplinary team**

Acute presentations

The patient presents with	Knowledge	Skills
Birth depression	<p>know the causes of possible outcomes</p> <p>know the statistics of the outcomes of birth depression</p> <p>understand the principles of resuscitation</p> <p>understand the physiology of resuscitation and the responses to it</p> <p>know the criteria necessary before perinatal asphyxia can be diagnosed</p> <p>understand the physiological effects of a hypoxic-ischaemic insult</p> <p>understand the long-term implications of hypoxic-ischaemic damage</p>	<p>be able to provide and lead basic and advanced resuscitation, including intubation</p> <p>be able to carry out resuscitation using bag and mask ventilation and cardiac compressions</p> <p>be able to intubate pre-term babies without direct supervision</p> <p>be able to recognise and initiate management to prevent secondary damage</p>
Respiratory distress (acute and chronic)	<p>understand the common causes of respiratory distress</p> <p>know the relevant investigations</p> <p>understand the principles and complications of differing ventilation techniques</p> <p>know the guidelines for surfactant therapy</p>	<p>be able to interpret chest radiographs and act on results</p> <p>be able to administer surfactant</p> <p>be able to initiate and continue to manage respiratory support on a ventilator</p>

	<p>understand the pathophysiology and management of chronic lung disease</p> <p>be aware of the indications for ECMO and nitric oxide therapies</p> <p>know the images needed and safe positions for arterial and venous lines</p> <p>have seen echocardiography where patent ductus arteriosus is diagnosed</p> <p>understand the contribution of patent ductus arteriosus (PDA) to respiratory compromise</p>	<p>be able to diagnose pneumothorax and perform insertion of a chest drain when indicated</p> <p>recognise when response to management is not optimal and be able to provide help or request help from specialist colleagues or other services</p> <p>obtain, interpret and react appropriately to blood gas and blood pressure results</p> <p>be able to teach and supervise the insertion of umbilical and peripheral, arterial and venous lines</p> <p>be able to identify signs suggestive of patent ductus arteriosus (PDA) and initiate management</p> <p>be able to plan the discharge of a baby on long term oxygen to the community</p>
Cyanosis not of respiratory origin	<p>understand the anatomy and implications of cyanotic congenital heart disease</p> <p>understand the pathophysiology of persistent pulmonary hypertension and know about treatment</p>	<p>be able to make a likely diagnosis and initiate appropriate investigations and treatment</p>
Hypotension	<p>understand the causes and effects</p> <p>understand the rationale for different treatment options</p>	<p>be able to interpret and act on blood pressure measurements</p>
Intra-uterine growth restriction and other nutrition problems	<p>understand the importance of nutrition in sick babies</p> <p>understand the importance of breast-milk feeds</p> <p>understand the principles of parenteral nutrition</p>	<p>be able to keep and interpret accurate growth records</p> <p>be able to prescribe appropriate nutrition and supplements</p> <p>be able to insert a</p>

	<p>know the causes of intrauterine and postnatal growth failure</p> <p>know about risk factors for necrotising enterocolitis</p> <p>know about the signs, symptoms and complications of necrotising enterocolitis</p>	<p>percutaneous long line</p> <p>be able to assess appropriate position of percutaneous long line from imaging</p> <p>be able to recognise and begin to address poor growth</p> <p>be able to recognise early signs of necrotising enterocolitis and initiate treatment</p>
Need for fluid or blood product therapy	<p>know the fluid requirements of pre-term, sick and growth-restricted babies</p> <p>know the causes of abnormal coagulation</p> <p>know when irradiated blood products are indicated</p> <p>know the indications for therapy with blood products</p>	<p>be able to assess fluid balance</p> <p>be able to act to correct fluid balance abnormalities</p> <p>be able to prescribe blood product transfusions</p> <p>be able to test for and recognise bleeding disorders</p> <p>Be able to manage treatment for bleeding disorders</p>
Abnormal neurological status, including seizures	<p>understand the aetiology and prognosis of abnormal neurological status</p> <p>know the stages of periventricular haemorrhage and leucomalacia</p> <p>know about the management of post-haemorrhagic hydrocephalus</p> <p>know the possible causes and effects of seizures</p> <p>know the possible causes of abnormal tone</p>	<p>be able to perform a neurological assessment</p> <p>be able to recognise common abnormalities in cranial ultrasound scans</p> <p>have had some experience of performing cranial ultrasound</p> <p>be able to make a likely diagnosis and initiate management of seizures</p>
Serious congenital anomalies	<p>understand the underlying pathology</p> <p>understand the use of antenatal diagnosis and the role of fetal medicine</p> <p>understand the role of fetal medicine and interventions that are available</p>	<p>be able to recognise serious abnormalities</p> <p>be able to diagnose common syndromes</p> <p>be able to initiate appropriate tests</p>

	<p>be aware of surgical interventions</p> <p>understand the impact on parents of the birth of a baby with serious congenital abnormalities or potential disabilities and the ensuing grief due to loss of the expected normal child</p>	<p>be able to respond to parents' immediate questions</p> <p>be able to break bad news to parents</p> <p>be able to refer appropriately to parent support groups and to community services before discharge</p>
Sepsis	<p>understand the importance of timely treatment, know the range of treatments and the likely pathogens</p> <p>know about nosocomial infection</p>	<p>anticipate early signs of sepsis and initiate appropriate anti-microbial therapy and supportive management</p> <p>practise effective infection control</p>
The dying baby	<p>understand the ethical principles involved</p> <p>understand the ethical principles in withdrawing or withholding care from an infant</p> <p>know about terminal care and bereavement counselling</p>	<p>be able to communicate sympathetically with parents and staff</p> <p>be able to lead management of withdrawal or withholding care from an infant</p> <p>be able to deal with personal stress and know when to look for support</p>

Postnatal ward and Outpatient presentations

The patient presents with	Knowledge and understanding	Skills
Jaundice	<p>know the investigations that will diagnose the causes of conjugated and unconjugated hyperbilirubinaemia</p> <p>know the appropriate management</p> <p>know how and when to undertake an exchange transfusion</p>	<p>be able to diagnose haemolytic jaundice</p> <p>be able to manage haemolytic jaundice</p> <p>be able to prescribe phototherapy appropriately</p> <p>anticipate the need for an</p>

		<p>exchange transfusion appropriately</p> <p>be able to undertake a full exchange transfusion under supervision or refer in a timely manner if unable to do so</p> <p>be able to investigate and manage prolonged neonatal jaundice appropriately</p> <p>recognise features which suggest serious pathology</p>
Feeding	<p>understand the importance of breast-feeding</p> <p>know the local policies on feeding</p> <p>know the causes of feeding problems</p>	<p>be able to support and advise breast-feeding mothers</p> <p>be able to make appropriate recommendations to address feeding problems and faltering growth</p>
Infants of diabetic mothers	<p>understand the physiology</p> <p>know the likely complications</p> <p>know when admission to a neonatal unit is indicated</p>	<p>be able to interpret blood glucose estimations</p> <p>be able to anticipate problems early and manage appropriately</p>
Congenital abnormalities	<p>know the common diagnoses and the likely prognosis of minor congenital abnormalities</p> <p>know about common presentations of congenital cardiac disease and which need urgent action</p>	<p>be able to advise parents appropriately</p> <p>be able to ensure that referral to an appropriate specialist or service occurs</p>

<p>Disordered development</p>	<p>know the causes and natural history of conditions causing disordered development</p> <p>understand current theories about the pathophysiology of cerebral palsy</p> <p>understand current theories about retinopathy of prematurity and sensorineural hearing loss and how these conditions may be prevented</p> <p>understand the common complications of prematurity and how to access expert assessment and management</p>	<p>be able to perform a developmental assessment</p> <p>be able to perform a neurological assessment</p> <p>be able to make a timely and appropriate referral to the multidisciplinary team</p> <p>be able to contribute to the support of families coping with developmental difficulties</p>
<p>Screening</p>	<p>know the range of screening tests used</p> <p>know about the universal Newborn Hearing Screening Programme</p> <p>know about retinopathy and cataract screening</p> <p>understand the difference between a screening and a diagnostic test</p> <p>understand the investigations that will follow</p> <p>know about developmental dysplasia of the hip</p> <p>know the management of developmental dysplasia of the hip</p>	<p>be able to explain false positive and positive tests to parents and respond to their concerns</p> <p>order or perform such tests appropriately</p> <p>be able to examine the newborn effectively</p> <p>be able to perform clinical screening tests</p> <p>be able to explain the difference between a screening test and a diagnostic test to parents</p>

Nephro-urology

Continuing development from the Level 1 document

- have the knowledge and skills to be able to assess and initiate management of patients presenting with nephro-urology problems in acute and outpatient settings
- be able to perform a reliable and accurate assessment of fluid status and initiate appropriate initial fluid management

- have the knowledge and understanding of fluid and electrolyte imbalance and blood pressure in children with kidney problems
- have an understanding of the implications for families of children with chronic kidney problems
- understand the principles of prescribing in children with renal disease

Change of wording from the Level 1 document

- understand the role of different renal imaging techniques including ultrasound, static and dynamic isotope scans in the investigation of urinary tract disorders and recognise common abnormalities

Substantial re-wording or new statements of competence for Level 3 Training

- be able to interpret blood bio-chemistry in relation to age and body size

Acute presentations

The patient presents with	Knowledge and understanding	Skills
Nephrotic syndrome	<p>understand the complications of the nephrotic state</p> <p>understand the principles of the pharmacological, dietary and fluid management</p> <p>understand the investigations including the indication for renal biopsy</p>	<p>be able to advise parents on long-term management and complications of treatment</p> <p>assess features in the presentation which suggest serious or significant pathology</p> <p>be able to assess fluid balance, circulation and risk of impaired renal perfusion</p>
Acute nephritis	<p>know the aetiology, pathophysiology and immunological basis of glomerulonephritides and vasculitides</p> <p>understand the investigations that will differentiate between the causes</p> <p>know the features that are prognostically significant</p> <p>know the range of immunosuppressive therapies that may be used in these conditions</p>	<p>recognise features in the presentation which suggest serious or significant pathology</p>

Acute renal failure	<p>know the causes of acute renal failure</p> <p>understand the investigations that may differentiate between these causes</p> <p>know the features of haemolytic uraemic syndrome</p> <p>understand the methods to correct fluid and biochemical abnormalities seen in renal failure</p> <p>know the indications for dialysis</p>	<p>be able to assess and initiate management of life-threatening events, for example, hyperkalaemia</p>
Hypertension	<p>know the techniques of blood pressure measurement</p> <p>know the causes of hypertension and the principles of treatment</p>	<p>be able to interpret blood pressure measurements</p> <p>be able to identify complications</p> <p>be able to initiate management and liaise with specialists effectively</p>
Acute scrotal pain	<p>know the differential diagnosis of this symptom</p>	<p>be able to recognise the important causes of acute scrotal pain</p> <p>be able to identify children who require urgent surgical referral</p>
Neonate with history of abnormal antenatal ultrasound of the renal tract	<p>understand the causes and management of antenatal hydronephrosis</p> <p>know about the causes of echogenic or cystic kidneys</p> <p>know about the inheritance patterns of renal abnormalities detected in fetal life</p>	<p>be able to recognise when to refer to a nephrologist or urologist</p> <p>be able to give basic explanation of the problem, management and prognosis to parents ante- or post-natally</p>
Stones	<p>know the causes of stone formation</p>	<p>be able to recognise presenting features</p> <p>be able to initiate management under supervision</p>

Outpatient presentations

The patient presents with	Knowledge and understanding	Skills
Voiding disorders including enuresis, dysuria, frequency and polyuria	<p>know both the physical and psychological causes of voiding disorders</p> <p>understand the principles of investigation of urinary tract infection, and the management of vesico-ureteric reflux.</p> <p>understand the principles of managing enuresis</p> <p>be aware of the association of genito-urinary symptoms with child sexual abuse</p>	<p>be able to take a detailed voiding history</p> <p>be able to interpret common urine microscopic and culture findings</p> <p>be able to identify relevant urological problems</p> <p>be able to investigate and provide long-term management within guidelines</p> <p>recognise features in the presentation which suggest serious or significant pathology</p>
Haematuria and proteinuria	<p>know the causes of these signs</p> <p>understand the investigations that will differentiate between the causes</p> <p>know the indications for renal biopsy</p>	<p>recognise features in the presentation which suggest serious or significant pathology</p>
Urogenital abnormalities	<p>know when surgical referral is required for circumcision, impalpable testes, hypospadias or suspected urinary tract obstruction</p>	<p>be able to examine the genitalia appropriately and with sensitivity</p> <p>recognise inflammatory or traumatic lesions</p>
Chronic renal failure	<p>know the causes and natural history of conditions causing chronic renal failure</p> <p>understand the pathophysiology of bone disease, anaemia and growth failure</p> <p>know about dialysis and transplantation</p>	<p>appreciate the impact of chronic renal failure in childhood and later adult life</p> <p>identify growth and nutritional problems</p> <p>use dietetic support effectively and refer to growth clinic appropriately</p>

Tubular disorders	know the range of presentations suggestive of an underlying renal tubular disorder know about the inheritance patterns of different tubular disorders	be able to recognise and interpret electrolyte abnormalities in blood and urine
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Neurology and Neurodisability

Continuing development from the Level 1 document

- have knowledge and understanding of the pathophysiology of common disorders affecting the nervous system
- know and understand the common causes of disability
- understand concepts of disability and what this means for the child and family
- be able to take an accurate neurological and neuro-developmental history
- be able to examine the nervous system of a newborn baby, child and young person
- be able to perform a reliable assessment of neuro-developmental status at key stages, including the newborn period, the first year of life, nursery age, school entry and late primary education
- be able to recognise a disabled child
- have the knowledge and skills to be able to initiate management of children with neurological and neurodisabling conditions in acute settings and know when and whom to call for help
- understand the life-threatening nature of acute neurological deterioration and when to call for help
- be able to recognise, initiate diagnostic tests and outline the management of common disorders
- understand the principles and use of neuro-radiological imaging
- have a basic understanding and experience of neuro-physiological tests
- understand the principles of prescribing and monitoring therapy
- understand the implications for families of children with neurological and neurodisabling conditions

- understand the impact of developmental disorders on the life of child and family at different developmental stages
- be able to work with families and professionals in the care of disabled children
- develop a commitment to advocacy on behalf of disabled children and their families
- understand the importance of seeking the views of all children to inform decisions about their individual care and about planning services
- have worked on specific cases with multi-disciplinary teams
- have experience of a range of communication skills with disabled children, their families and other professionals
- be aware of local services and how to access them
- have experience of working with other services outside neurology and neurodisability such as child protection, education, services for looked after children and adult services
- have experience of how agencies work together to address how children with health and medical needs are managed at school

Substantial re-wording or new statement of competence for Level 2 Training

- be aware of the role of the Designated Medical Officer to the Local Education Authority (LEA)
- be aware of the statutory requirement to notify children who may have special educational needs to the LEA and to know how to do so
- have experience of the local Special Educational Needs (SEN) panel
- be able to write SEN medical reports on simple cases
- have experience of SEN annual reviews and transition planning
- be able to recognise and come to a likely diagnosis of common developmental disorders such as cerebral palsy, dyspraxia, ADHD, specific learning difficulties and arrange timely and appropriate specialist assessment
- know how equipment can be used to lessen the effects of disability and how to refer
- be able to write reports on medical or developmental conditions for parents and non-clinical staff in education and elsewhere that are easily understood

by the lay person, and that explain the implications of the condition and how it may impact on the child and her or his carers in non-clinical settings

- know about what benefits may be payable to the disabled child and/or carers and how they may be accessed
- know about local respite facilities and how they may be accessed

Substantial re-wording or new statements of competence for Level 3 Training

- **be able to work effectively with education services**
- **be able to distinguish simple developmental delay from developmental disorders and be aware of the cases which require specific or multi-disciplinary input and refer appropriately**
- **know about and be prepared to find out about self-help and support groups for children and their families with conditions in their specialist area and be able to direct parents to appropriate groups**
- **recognise features of life-threatening neurological disorders including raised intracranial pressure, CNS tumours and initiate the appropriate clinical response with apposite urgency**
- **make appropriate use of neurodiagnostic tools, seeking expert advice appropriately about proceeding with testing or not, including in the emergency setting, and about interpretation of results**
- **be able to prescribe and monitor therapy for the breadth of neurological and developmental disorders, recognizing the limits of their own expertise, showing awareness of guidelines and seeking expert advice appropriately**
- **be able to manage straightforward cases of common neurological and developmental disorders, recognizing the limits of own expertise, showing awareness of guidelines and seeking expert advice appropriately**
- **be able to contribute to or lead local care, working within networks or teams when appropriate**

- **obtain equipment appropriately to maximise participation for individual children**
- **access support and help with benefits advice, support and self-help groups, respite and short breaks appropriately on behalf of individual children and their families**

Acute presentations

The patient presents with	Knowledge and understanding	Skills
Seizures	<p>know the common causes of seizures in newborn babies and children</p> <p>know about common epileptic syndromes</p> <p>understand the links between epilepsy and behaviour problems</p> <p>understand the place and principles of the EEG and neuro-imaging in investigation</p> <p>know about the long term implications of epilepsy, including different epilepsy syndromes and the risk of learning difficulties, accident or sudden death</p>	<p>be able to initiate treatment for acute continuing seizures</p> <p>be able to refer to intensive care teams appropriately and lead the care maintaining patient safety until that team takes over</p> <p>be able to form a differential diagnosis</p> <p>be able to decide initial and continuing anticonvulsant therapy in babies and children in conjunction with the local epilepsy service</p> <p>be able to advise parents about education and safety</p> <p>work effectively with the multidisciplinary team and be able to take the lead where appropriate</p>
Faints and “funny turns”	<p>be able to formulate a differential diagnosis for faints and “funny turns”</p> <p>be able to initiate the investigations that may differentiate between these causes</p>	<p>be able to make a likely diagnosis</p> <p>be able to explain likely diagnoses to parents and manage the case</p>
Acute focal neurological signs	understand the implications of acute focal neurological signs	be able to demonstrate the signs

	<p>understand the principles of investigation</p>	<p>be able to interpret the signs</p> <p>have experience of interpretation of CT and MRI scans</p> <p>be able to give diagnoses to parents, and be able to share difficult information effectively and compassionately</p>
<p>Ataxia, clumsiness and abnormal movement patterns</p>	<p>know the common possible causes of ataxia, clumsiness and abnormal movement patterns</p> <p>know the indications for investigations</p>	<p>be able to recognise the signs</p> <p>recognise which urgent investigations are needed</p>
<p>Hypotonia, neuropathies and myopathies</p>	<p>know about the common causes of hypotonia, neuropathies and myopathies</p> <p>know about the relevant neurophysiological and metabolic investigations</p>	<p>be able to demonstrate, the signs</p> <p>be able to elicit and interpret the signs</p> <p>be able to form a likely differential diagnosis</p> <p>be able to initiate and interpret appropriate tests, seeking expert advice as appropriate</p>
<p>Meningism and altered consciousness</p>	<p>know the likely causes or pathogens of meningism and altered consciousness</p> <p>know about the presentation of partially treated and tuberculous meningitis and atypical presentations in immuno-deficient states</p> <p>understand the principles of treatment</p> <p>be aware that organic brain conditions can lead to psychotic symptoms</p> <p>know when it is safe to perform a lumbar puncture</p> <p>know the principles of establishing brain stem death</p>	<p>assess and manage early presentations of meningitis and encephalitis</p> <p>use a validated coma score</p> <p>ensure prophylactic therapy for contacts of meningitis</p> <p>assess and initiate management of raised intra-cranial pressure</p> <p>initiate therapy appropriately</p> <p>call for help promptly</p> <p>recognise the need for urgent referral to audiology</p>

	<p>know about the long-term sequelae of meningitis and how they might be managed</p>	<p>specialists after bacterial meningitis</p> <p>be able to decide which children should be followed up to monitor their progress after meningitis</p>
<p>Neural tube defects and other congenital anomalies</p>	<p>know about antenatal diagnosis of neural tube defects and other congenital anomalies and their prevention</p> <p>know about the ethical principles involved in management decisions</p> <p>understand the multi-disciplinary management needed in this condition, including orthopaedic, urinary and bowel management, learning difficulties and the social implications of these conditions</p>	<p>be able to recognise syndromes</p> <p>be able to recognise the signs and symptoms of acute and chronic blocked shunts</p> <p>be able to communicate sympathetically with parents</p>
<p>Trauma to central and peripheral nervous systems</p>	<p>be aware of the implications of severe head injury and the possibilities for rehabilitation</p> <p>know about the long-term sequelae of brain injury and their effects on learning and how they might be managed</p> <p>know about other neurological trauma such as brachial plexus injury</p>	<p>be able to lead initial acute management and transfer appropriately</p> <p>work effectively with the multidisciplinary team and be able to take the lead where appropriate, to manage the medium- and longer-term implications and rehabilitation</p>
<p>Fever or illness in a child with complex disabilities</p>	<p>be aware of the range of diagnostic possibilities, including chest infection, aspiration, gastro-oesophageal reflux, oesophagitis, constipation, hip and joint problems, and dental problems</p> <p>know when and where to get help</p>	<p>be able to assess child with complex disabilities who is unwell</p> <p>be able to recognise important indicators of specific conditions</p>

Community and Outpatient presentations

The patient presents with	Knowledge and understanding	Skills
Neuro-developmental regression	<p>be familiar with the main investigations that will differentiate between the causes of neuro-developmental regression and how to access further expert help</p> <p>understand the implications of this condition</p> <p>understand the multi-disciplinary management needed in these conditions including the need for palliative care</p>	<p>be able to assess development</p> <p>be able to recognise regression of developmental skills and refer appropriately for investigation</p>
Disordered development	<p>understand the common causes of disability, disordered development, and learning difficulties</p> <p>know about the current theories on the pathophysiology of cerebral palsy</p> <p>know about common secondary disabilities and co-morbidities</p>	<p>have experience of working with the child development team or centre</p> <p>recognise common causes of disordered development, manage problems appropriate to the skills and services available locally</p> <p>refer complex difficulties appropriately for specialist investigation and assessment</p>
Speech and language delay, including hearing disorders	<p>know the common causes of speech and language delay and disorders and autism</p> <p>know about multi-disciplinary investigation and therapy for those with more complex disorders</p> <p>know the risk factors for sensorineural hearing impairment</p> <p>know the principles of hearing testing at various ages</p> <p>know the support available for hearing impaired children</p> <p>know how to communicate with a</p>	<p>be able to distinguish simple phonological delay from more significant disorders</p> <p>be able to recognise abnormal speech and language patterns</p> <p>recognise when referral to an appropriate specialist is needed</p> <p>recognise the need for referral of sudden hearing impairment</p> <p>recognise the need for referral to audiology specialists or to an ENT surgeon</p>

	<p>hearing impaired child or language disordered child including the child with autism</p> <p>understand the importance of hearing assessment in children with speech and language problems and autistic spectrum disorders</p>	<p>recognise autistic features in disordered developmental assessments and know how to refer appropriately</p>
Conductive hearing loss	<p>know about the common causes of conductive hearing loss</p> <p>know the principles of hearing testing at various ages and of management of hearing impairment</p>	<p>have experience of hearing tests at various ages</p> <p>be able to recognise when further assessment is required and how to access it</p>
Sensorineural hearing loss	<p>know about the risk factors and common causes of sensorineural hearing loss</p> <p>be able to recognise when further assessment is required and how to access it, including investigations that may be appropriate</p> <p>be aware of the principles of management, including cochlear implantation, and educational approaches to sensorineural hearing loss</p>	<p>be able to recognise syndromes and situations where sensorineural hearing loss is likely to occur</p> <p>be aware of the assessment of sensorineural hearing loss</p> <p>be able to communicate with the child with sensorineural hearing loss</p>
Weakness	<p>know the possible causes of weakness and patterns of presentation</p>	<p>be able to take a relevant history</p> <p>be able to elicit and interpret appropriate signs</p>
Abnormal head size and shape	<p>know how to recognise abnormal head shapes and to differentiate between serious and non-serious causes</p> <p>know the common causes of hydrocephalus, macrocephaly and microcephaly</p>	<p>be able to plot and interpret a head growth chart</p> <p>be able to reach a likely diagnosis and initiate investigations for abnormal head growth</p> <p>know about the insertion and ongoing management of ventricular-peritoneal shunts</p>

Headache	know the possible biological, psychological and social factors that can contribute to headache	<p>be able to recognise when headache may indicate serious illness and arrange prompt investigations, interpret results and arrange ongoing treatment and management appropriately</p> <p>be able to recognise and manage common causes of recurrent headache including non-organic causes, tension headache and migraine</p> <p>be able to initiate appropriate investigations and treatment and manage ongoing cases</p>
Specific learning difficulties	understand how specific learning difficulties present at school	be able to identify when specific learning difficulties might be present and how to refer appropriately for further assessment

Ophthalmology

Continuing development from the Level 1 document

- be able to examine the eye and recognise those abnormalities which require urgent referral or treatment
- be able to take a relevant history for a child with suspected visual impairment
- be able to use an ophthalmoscope to recognize an abnormal fundus and lens opacity
- be able to test for colour vision
- understand the microbiology and treatments for common eye infections including orbital cellulitis
- know about the eye manifestations of common genetic and systemic diseases
- recognize and interpret abnormal eye movements

- know about support at school and other resources for children with visual impairments

Change of wording from the Level 1 document

- be able to undertake visual acuity testing at various ages

Acute presentations

The patient presents with	Knowledge and understanding	Skills
A red eye	know the common causes of red eye	be able to identify children who need referral be able to initiate investigations and manage appropriately
A possible squint	know the causes of acute onset and the congenital causes of a squint	be able to recognise abnormal alignment of the eyes and examine corneal reflexes know how to refer appropriately
Ptosis	know the congenital and acquired causes of ptosis know how to undertake the Tensilon test	
Proptosis	know the common causes of proptosis	be able to initiate appropriate investigations be able to examine for signs of relevant systemic disease
Abnormal movement	know the ocular and neurological causes of benign abnormal eye movements	be able to interpret clinical findings correctly be able to undertake a full neurological examination where appropriate know about the implications of nystagmus and refer

		appropriately for further visual assessment
Abnormal fundus	<p>know the normal appearance of the retina</p> <p>know the value of fundal examination in suspected child abuse cases and certain developmental syndromes</p>	<p>be able to identify papilloedema, abnormal vessels and pigmentation</p> <p>be able to identify haemorrhage</p>
Visual impairment	<p>know the common and preventable causes of visual impairment</p> <p>know about the investigations that might be used to find a cause</p> <p>know about the specific developmental patterns that occur in the child with visual impairment</p> <p>know about educational approaches to the child with visual impairment</p>	<p>be able to recognise congenital cataract and refer urgently for further management</p> <p>have experience of assessment of the child with suspected visual impairment</p>

Palliative Care

Continuing development from the Level 1 document

- be familiar with national and local guidelines on withdrawing and withholding treatment
- recognise factors which determine when care of a patient becomes palliative
- know the importance of seeking advice when treatment may not be in the best interests of a child
- know about appropriate therapeutic intervention in symptom control
- be aware of the ethical issues in therapeutic intervention in children with life-limiting conditions
- know about local opportunities for respite care, including hospice availability
- know the tests for brain stem death

- recognise loss and grief and their effects on the health and well-being of children, families and professionals
- be aware of local bereavement support services
- recognise the skills and experience of other professionals
- acknowledge personal needs for support and the needs of other professionals involved in the care of the dying child for support networks
- understand the need for respect of the wishes of the child or young person particularly when these are different from those of the family and health professionals

Change of wording from the Level 1 document

- know about guidelines on the management of sudden infant death, including the RCPCH Kennedy report

Substantial re-wording or new statement of competence for Level 2 Training

- know about the broad definition of palliative care in childhood
- **know and follow legal and ethical guidelines relating to withdrawing life support**
- recognise factors which determine when care of a patient becomes palliative **and be able to contribute to provision of palliative care**
- **be able to lead the management of acute presentations of sudden unexpected deaths in infancy and childhood and be able to put local procedures into action**

Respiratory Medicine, with Ear, Nose and Throat

Continuing development from the Level 1 document

- have the knowledge and skills to be able to assess and initiate management of patients presenting with respiratory problems in acute and outpatient settings
- have the knowledge and understanding of factors relating to long-term management of chronic respiratory problems
- understand the life-threatening nature of some of these conditions and when to call for help

Acute presentations

The patient presents with	Knowledge and understanding	Skills
Sore throat and / or mouth	<p>know the causes of these complaints</p> <p>know appropriate therapies</p>	<p>be able to manage these conditions</p> <p>recognise features in the presentation which suggest serious pathology</p>
Nose bleeds	<p>know the common causes of nose bleeds</p>	<p>recognise those with underlying pathology</p>
Snoring and obstructive sleep apnoea	<p>know the causes of snoring and be aware of complications of this presentation</p> <p>understand the indications for sleep studies</p>	<p>be able to refer appropriately to an ENT surgeon</p>
Earache	<p>know the common causes and complications</p> <p>know the risk factors for otitis media with effusion</p> <p>understand the vulnerability of children with cleft palate, Down's syndrome and other cranio-facial conditions</p>	<p>recognise an abnormal ear drum</p> <p>be able to manage this condition</p> <p>be able to treat with antibiotics where appropriate</p> <p>recognise when to refer to audiology specialists or an ENT surgeon</p>
Acute stridor	<p>understand the potentially life-threatening nature of this condition</p> <p>know about allergic and infective causes, e.g. epiglottitis, laryngotracheitis, retropharyngeal abscess, and foreign body</p>	<p>be able to manage this condition</p> <p>recognise when to request help from a specialist colleague, anaesthetist or ENT specialist</p> <p>recognise children with existing chronic upper airway problems</p>

Acute severe asthma	know and be able to apply the British Thoracic Society guidelines for management	<p>be able to assess the severity of an asthma attack</p> <p>be able to institute appropriate emergency treatment</p> <p>be able to lead treatment of severe asthma and review ongoing treatment before discharge</p> <p>recognise when more specialist help is needed</p>
Lower respiratory tract infection, including pneumonia and bronchiolitis	<p>know the causes of respiratory tract infections</p> <p>know appropriate therapies</p> <p>know indicators of severity</p>	<p>be able to manage these infections</p> <p>be able to recognise patients requiring intensive care</p> <p>be able to recognise complications, for example, empyema and manage appropriately</p>
Respiratory failure	<p>know the indications for acute and long-term ventilatory support</p> <p>be aware of the agreed resuscitation plans for individual patients</p>	<p>initiate urgent assessment and treatment including assisted ventilation</p> <p>liaise with more senior paediatricians, anaesthetists and intensivists when appropriate</p>

Outpatient presentations

The patient presents with:	Knowledge and understanding	Skills
Cervical Lymphadenopathy	know the causes of cervical lymphadenopathy	recognise when investigation and surgical intervention is needed
Chronic stridor	know the causes of chronic stridor	recognise when and how to investigate
Asthma	be familiar with the British Thoracic Society guidelines for management of asthma	institute age-appropriate individualised management plan for asthma

	<p>know about patterns of asthma and exacerbating factors</p> <p>know the complications of long-term use of medications for asthma</p>	<p>be able to modify an asthma management plan appropriately</p> <p>teach children how to use a peak flow meter and diary</p> <p>teach and assess inhaler technique</p> <p>be able to liaise in school effectively to ensure the child has access to emergency treatment at school and other settings</p>
Recurrent or chronic chestiness	<p>know the respiratory and non-respiratory causes, including aspiration, of recurrent or chronic chestiness</p> <p>know about predisposing conditions such as neuromuscular and skeletal disorders, and immunodeficiency</p>	<p>recognise features in the presentation which suggest serious or unusual pathology</p> <p>know about the role of bronchoscopy, pH studies and video-fluoroscopy</p> <p>know how to perform and interpret basic lung function tests</p>
Cystic fibrosis	<p>know and understand the pathophysiology and natural history of cystic fibrosis</p> <p>understand the principles of treatment and the diagnostic tests available</p>	<p>work with a multi-disciplinary team, particularly physiotherapy and dieticians</p>

Section 5

Practical procedures and Investigations

***Note:** Specialist neonatal procedures will need to be maintained by those who have direct responsibility for neonatal care*

***Note:** Standards for assessment at this level require expertise in procedures and investigations which will have been learned at earlier stages of training.*

By the end of Level 3 Training, trainees will:

- know the appropriate indications for practical procedures and investigations
- know the contraindications and complications of procedures
- know the local and national guidelines for obtaining informed consent
- know the local and national guidelines for undertaking investigations or procedures
- know the local guidelines for providing sedation and pain relief for practical procedures
- know the relevant anatomical markers for invasive procedures
- know and practise scrupulous aseptic techniques
- be aware of safety issues for patients and staff in relation to investigations of body fluids and radiation
- understand the importance of post-mortem investigations
- know the national and local guidance for obtaining consent for post-mortem
- be able to interpret results of investigations requested and respond appropriately
- be able to record results and document procedures legibly and accurately
- be able to give appropriate medical information when requesting investigations
- know that results should be requested clearly and retrieved promptly
- understand common age-appropriate normal ranges or appearances
- be able to use all equipment required to undertake common procedures and investigations
- be able to explain the investigation results to parents and/or the child
- be aware of the factors that are likely to influence the anxiety of the child, parent and doctor and know how to enlist effectively the help of play-leaders, nursing staff and more senior paediatric staff when necessary
- be receptive to feedback from patients and parents/carers on the effects of medication/treatment
- know about the role of complex investigations e.g. CT and MRI scans and their diagnostic potential and complications
- recognise when the results of commonly-used radiological investigations are abnormal

- have developed confidence in independent performance of practical procedures
- be able to supervise and teach others
- recognise complications of procedures and be able to respond appropriately
- understand and follow the local guidelines for the prevention and management of needle-stick injury
- be able to recognise the importance of universal precautions as well as the disposal of sharps within the department
- have experience of speaking to parents when complications have occurred
- know about processes for critical incident reporting
- obtain informed consent appropriately
- supervise handover of results that still need to be obtained at the end of shifts

Diagnostic procedures

By the end of Level 3 Training, trainees will be able to perform the following diagnostic procedures independently:

- collection of blood from central lines
- umbilical artery and venous cannulation and sampling
- peripheral arterial cannulation
- venesection
- capillary blood sampling
- suprapubic aspiration of urine
- urethral catheterisation
- routine testing of urine
- perform basic lung function tests
- electrocardiogram
- lumbar puncture
- non-invasive blood pressure measurement

Therapeutic procedures

By the end of Level 3 Training, trainees will be able to perform the following therapeutic procedures independently

- administer intradermal, subcutaneous, intramuscular, intravenous injections

- percutaneous long-line insertion
- bag, valve and mask ventilation
- needle thoracocentesis for pleural effusion or pneumothorax
- tracheal intubation
- intubation of newborn infants of most gestations
- administration of surfactant
- external chest compression
- insertion of intraosseous needle

They will be able to perform the following procedures if involved in the provision of neonatal care:

- intubation of extremely immature babies or those with congenital malformation of head and neck
- drain a pneumothorax in babies and older children
- neonatal chest drain insertion
- exchange transfusion (full and partial)
- cranial ultrasound scanning
- cerebral ventricular tap
- abdominal paracentesis

Pharmacology and Therapeutics

By the end of Level 3 Training, trainees will:

- know and understand the pharmacological basis for treatments
- know the approved indications and justification for prescribing drugs in common paediatric problems
- know the pharmacokinetics and pharmacodynamics of commonly prescribed drugs
- be able to calculate drugs accurately according to specific dose for weight, or age/weight range or on a specific dose/surface area basis
- know the risks of prescribing in the child-bearing years, in pregnancy and in breast-feeding mothers
- know about the roles of the regulatory agencies involved in drug use, monitoring and licensing (for example the National Institute of Clinical

Excellence, the Committee on Safety of Medicines, the Medicines and Healthcare products Regulatory Agency and Hospital Formulary Committees)

- be able to find out information necessary for safe prescribing through use of paediatric formularies and pharmacy liaison
- know about drug interactions of commonly used drugs
- know about procedures for obtaining consent in children and young people for the administration of drugs
- be able to use the local and national guidelines for the relief of pain in children
- know and follow local policies for intrathecal cytotoxic therapy
- respond appropriately to errors of prescription or administration and be able to talk to parents about this

- **be able to prescribe safely and supervise prescription for the newborn, and for children of all ages**
- **know about the licensing of medicines for paediatric patients and unlicensed and off-label use and the implications of extemporaneous products**
- **know how to explain relevant potential adverse side-effects**
- **be able to advise and supervise safe prescription of intravenous fluids to medical and surgical patients**
- **be able to prescribe in a manner that enhances adherence and provide information and explanation that enhances concordance**

References

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