A Framework of Competences for Level 2 Training in Paediatrics

October 2005

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FOREWORD

I am very pleased to be able to present this second stage of our framework of competences. The framework for the first years of specialist training was published in October 2004 and this document builds on that publication. We have retained statements of competence which are fundamental to all stages of training and revised the levels of expectations of those which reflect growing confidence and competence in trainees. The statements of competence in this new framework reflect the higher demands and challenges of the job and the expectations that trainees will now take more responsibility and lead initiatives in their work.

As with the previous document, we are grateful to all the colleagues who have worked so hard with us over the year to ensure that we have the most comprehensive document possible. It represents a lot of hard work from our Officers, the CSAC chairs in General and Community paediatrics and our education adviser.

Council has approved this document and we have approval also from the Specialist Training Authority. It is on our website and it has been sent to all educational supervisors. Now that we have the curriculum in place, we are working on a range of assessment methods which will reflect the varied expectations of trainees across the very different domains of their work as paediatricians. We will want to ensure that they have a sound knowledge base, expertise in clinical procedures particularly relevant to their work with children and, in the more challenging areas to assess, sound clinical reasoning skills and effective interpersonal skills.

We would like to encourage anyone with comments and suggestions about the contents or the level of competence expected at this stage of training to contact us at the college. This will help greatly in the revision of the document over the next year as it goes into use in the workplace.

We would like to thank all those college members and those who were consulted and made such valuable contributions to the development of this framework.

Patricia Hamilton
President - Elect
October 2005

The document was approved by Council on 6 July 2005
1. Introduction

Who is this book for?
It is for doctors in Level 2 Training in Paediatrics and their tutors and educations 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. You need this book as it forms the basis of your assessment at the end of Level 2 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 second stage in your training as a paediatrician. The competences you gained during Level 1 Training have formed the basis for your progression now into Level 2 Training and later Level 3 Training on to a Consultant post. Table 1 (page 10) illustrates this progression through your training.

A note about the format of this document
The way in which the statements are written in this document is intended to reflect the progression from one stage to the next. You will find under separate headings: statements from the Level 1 framework where they continue to be relevant; changes to many of the statements to reflect your growing levels of confidence and competence; and entirely new statements to reflect areas of responsibility and challenge that have not been expected of you before. In the lists of competences, we have retained the Level 1 wording *(in italics, in brackets)* wherever practicable to provide a point of comparison with the revised level of competence for Level 2. For example, in the section on Skills, trainees at Level 2 are expected to be able to:

- show the use of *(begin to develop)* analytic, clinical reasoning skills

Where initially trainees were expected to understand what was required and ‘begin to develop’ competence in these skills, the expectation at Level 2 is that they will apply these in their practice. Statements which do not include italics will have either minor changes of wording or will be entirely new, as indicated by the heading of the section in which they appear.
In the tables, we have used formatting **in bold** to indicate new statements of progression for Level 2 trainees. This helps to keep the text uncluttered and gives prominence to these new levels of expectation of trainees. For example, in the Dermatology section of the Level 1 framework, trainees are expected to ‘know about serious drug reactions, for example, Stevens-Johnson syndrome’ (see page 39). This is identified as an area of knowledge and understanding and listed in that column. But by the time trainees reach the Level 2 years of their training, they are expected to ‘recognise this reaction’, not simply to know of its existence. An area of knowledge at Level 1 has become a skill at Level 2. The statement is placed accordingly in the Skills column and is presented in bold to indicate the change of wording and level of competence.

**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. This is when we begin to 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.

This framework was approved by Council on 6th July 2005. It will be revised in a year’s time to take account of comments and suggestions made by those using the document in practice.
Acknowledgements

This document builds on the Framework of Competences for Level 1 Training. The editorial team is as before. We would like to thank Edward Wozniak, Gabrielle Laing and the General Paediatric and Community Child Health Specialist Advisory Committees for their tremendous support in helping us to put this document together. We would also like to thank individual members of the college, trainees and experienced paediatricians, who have contributed to specific sections and to the whole document. We are also very grateful to Carole Myer, Chair of the Patients and Carers Advisory group and lay representative on Council for her helpful suggestions.

Working group:

Kim Brown, Education Adviser
Patricia Hamilton, President-elect, Royal College of Paediatrics and Child Health
Gabrielle Laing, Chair, Community Child Health Specialist Advisory Committee
Mary McGraw, Vice-President-elect for Training and Assessment
Claire Smith, Donald Court Fellow, Officer for General Professional Training
Edward Wozniak, Chair, General Paediatrics Specialist Advisory Committee
### Progression in the Professional Development of a Paediatrician

#### During Level 1 Training
- **Acquires fundamental knowledge base**
  - Applies knowledge base to provide appropriate clinical care.
- **Evaluates knowledge and modifies clinical care pathways to enhance patient care.**
- **Acquires clinical examination and assessment skills and applies these in clinical practice.**
  - Analyses clinical findings to derive appropriate differential diagnosis and management plans.
  - Evaluates assessment findings; refines and modifies management plans.
- **Acquires all basic technical skills and basic life support**
  - Proficient at all basic technical procedures, some complex procedures and provides advanced life support.
  - May relinquish some skills in these areas dependent on area of clinical practice. May acquire specialty specific skills.
- **Performs allotted teaching tasks**
  - Plans and delivers teaching to trainees and other professionals. Develops peer mentoring skills.
  - Plans and modifies curricula. Performs assessment and appraisal. Able to provide mentorship.
- **Aware of management issues**
  - Develops management skills and able to take responsibility for a defined project.
  - Can negotiate and deal with conflict. Can contribute to Committees.
  - Can evaluate and modify management structures.
- **Performs allocated audit projects and understands the audit cycle**
  - Designs audit project and understands risk management. Able to write appropriate clinical guidelines.
  - Understands the Clinical Governance implications
  - Facilitates audit, and evaluates results. Evaluates guidelines and ensures implementation of appropriate changes.
- **Understands the principles of critical appraisal and research methodology**
  - Able to appraise the literature critically and apply to clinical practice.
  - Able to evaluate critical appraisal performed by others. Able to lead research projects and support others in research.
- **Works in multi-professional teams**
  - Functions as a team member in a multi-disciplinary environment.
  - Evaluates and modifies multi-professional teamwork.
  - Functions accept leadership from other members of the team.

#### During Level 2 and 3 Training
- **Advances clinical practice**
  - Acquires clinical examination and assessment skills and applies these in appropriate differential diagnosis and care.
  - Acquires knowledge and applies these in appropriate clinical care.
  - Applies knowledge base to provide comprehensive care.
- **Continuing development as a consultant**
  - Performs allocated teaching tasks
  - Plans and delivers teaching to trainees and other professionals. Develops peer mentoring skills.
  - Plans and modifies curricula. Performs assessment and appraisal. Able to provide mentorship.
- **Aware of management issues**
  - Develops management skills and able to take responsibility for a defined project.
  - Can negotiate and deal with conflict. Can contribute to and lead committees. Evaluates and modifies management structures.
- **Performs allocated audit projects and understands the audit cycle**
  - Designs audit project and understands risk management. Able to write appropriate clinical guidelines.
  - Understands the Clinical Governance implications
  - Facilitates audit, and evaluates results. Evaluates guidelines and ensures implementation of appropriate changes.
- **Understands the principles of critical appraisal and research methodology**
  - Able to appraise the literature critically and apply to clinical practice.
  - Able to evaluate critical appraisal performed by others. Able to lead research projects and support others in research.
- **Works in multi-professional teams**
  - Functions as a team member in a multi-disciplinary environment.
  - Evaluates and modifies multi-professional teamwork.
  - Functions accept leadership from other members of the team.
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 speciality 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

Teaching and learning can look quite different in formal contexts such as a lecture theatre or a seminar room and in clinical contexts, such as a ward round. Where clear aims and objectives, a well-planned story-line and a handout might be essential parts of a good lecture, they may not be possible or appropriate in A&E or on the delivery suite. But what does bring teaching and learning in formal and clinical contexts together is the commitment to helping doctors in training understand, develop skills or clarify in their own minds something they understood less well before the teaching event took place. And the only way we can be sure that doctors are learning is to talk to them, firstly about their learning needs, the gaps in their knowledge, understanding and skills and afterwards about the ways in which they feel they have learned or understood something better than they did before. 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 actively seek out trainees’ responses to their teaching so that they can make adjustments accordingly and ensure that effective learning takes place.

In drawing up this framework of competences, we have envisaged a wide range of opportunities in which trainees will learn. By structuring the competences around areas of knowledge and understanding, skills, values and attitudes we acknowledge the different ways in which they will be acquired. There will be new knowledge about genetics, for example or new research findings to absorb. These may best be gained through personal study or a in a formal teaching context, such as a lecture or seminar. Then there will be practical procedures to learn and skills to develop, such as resuscitation treatment or learning how to talk communicate with young children. Role models are important in these areas of learning and trainees will need to watch experienced doctors and learn from them in their practice, in consultations and ward rounds, in intensive care units and other clinical settings. Values and attitudes present different challenges. Many of the competences in these areas confront trainees with their professional responsibilities and their personal views and the potential conflicts between them. Role-play, simulation and group-work tasks all offer safe and structured environments in which to explore these affective dimensions of learning and will be more appropriate than formal teaching settings.

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

The learning objectives in this section reflect the general practice of a paediatrician and have been developed from our description What is a paediatrician? The detail of speciality-specific practice can be found in Section 4 (page 29).

The statements are mapped to Good Medical Practice¹ (2001) and to Good Medical Practice in Paediatrics and Child Health² (2002), essential reading for all trainees. In addition, you should ensure that you have read carefully the Laming Report³ (2003) and the UN Convention on the Rights of the Child⁴. For full reference see page 87.

By the end of Level 2 Training, trainees will:

**Knowledge and Understanding**

- understand the duties and responsibilities of a paediatrician in the safeguarding of babies, children and young people
- understand the duties and responsibilities of a paediatrician to support and enable parents and carers to be effective in caring for their children
- know and understand the scientific base relevant to clinical practice in paediatrics
- know the aetiology and patho-physiology of common and serious childhood conditions
- understand the promotion of health and the management of ill-health in babies, children and adolescents
- understand the specific health issues, diseases and disorders related to these stages of growth and development
- recognise the mental health components of all paediatric illness
- recognise the effects that school and other social settings may have on childhood illness and vice versa
- understand the factors that affect a child’s level of anxiety about illness, treatment or examination
- recognise the impact on parents and the rest of the family of acute or chronic illness, hospitalisation or the death of a child
- understand the importance of effective strategies for the management of pain
- understand the importance of agreed management plans for individual patients
- understand the different factors that have an influence on the patient’s journey
- know about the agencies, both statutory and voluntary, that can provide support to children and their families in coping with their health problems
Change of wording from the Level 1 Training document

- understand the limitations of their competence, in clinical practice and in their relationships with patients, and know where and when to ask for help, support or supervision

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

- have a good working knowledge of the use of formularies
- have an understanding of common treatments for clinical conditions and the evidence-base for these
- know about common complementary and alternative therapies and where to find out about them so that an informed and safe choice about treatment can be made
- understand possible medical and psychosocial reasons which might lie behind a patient’s difficult behaviour
- know about procedures and guidelines to support the management of conflict in relationships with children, young people and their families
- know how to access such national resources as the Contact a Family (CAF) Directory and the Internet as well as local sources to provide information to children and families about support groups

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

Skills

- be able to examine children and young people accurately and sensitively in appropriate settings
- recognise presentations of common disorders
- recognise case histories which suggest serious or unusual pathology
- recognise the diseases and host characteristics which make certain presentations life-threatening
- be able to assess the developmental level of children and young people
- be able to assess the mental state of children and young people
- begin to develop skills in the management of emotionally complex family situations
- develop expertise in practical procedures specifically related to the clinical care of small babies and children, and young people
- have begun to develop strategies to manage a child’s anxiety and personal anxieties
- be able to use guidelines appropriately
- have strong communication and interpersonal skills to enable them to work effectively with patients and their families, and colleagues in multi-professional and multi-disciplinary teams
- demonstrate the ability to work in multi-disciplinary teams and with colleagues from a wide range of professional groups
understand the need to interact with professionals in other disciplines and agencies and from the voluntary sector

be able to make reliable and accurate mathematical calculations required in clinical practice eg drug and fluid prescriptions

be able to prescribe safely and write legible prescriptions, using appropriate medications in correct doses

keep accurate, legible and relevant medical records

show effective time management skills in their professional roles

be able to use information technology effectively in clinical practice and audit

have begun to develop the ability to approach new situations which require good clinical judgement with an analytic and informed approach

Change of wording from the Level 1 Training document

be continuing to develop a wide range of (have understood the need for and begun to develop) effective communication skills specific to their work with babies, children, young people and their families

be able to take responsibility for an effective consultation that routinely includes biological, psychological, educational and social factors in the child and the family

be able to assess symptoms and signs accurately and interpret findings 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

understand (begin to understand) their role in managing the consequences of chronic illness for a child and family

show regular use of (begin to develop) analytic, clinical reasoning skills

begin to take responsibility for the longer-term management of patients with common acute and long-term conditions (be able to assess and initiate management of patients appropriately)

be able to initiate appropriate investigations and management plans appropriate to the case

show that they are regularly using (know how to access) clinical databases and know where to go to find web-based information

be able to give an evidence-based presentation and be able to analyse critically those given by others

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

have developed skills and strategies to respond effectively to challenges of increased responsibility
• be able to provide advanced neonatal and acute paediatric life support as demonstrated by successful completion of and assessment by a recognised course (APLS)
• be able to recognise, assess and initiate management of infants and children who may have been subject to child abuse
• show increasing confidence and independence in decision-making in the care of patients
• have developed the self-knowledge, confidence and personal high standards to acknowledge where an assessment may not be comprehensive and to recognise that they need to go back to the child, young person or family for further information
• be able to formulate an initial management plan for complex cases including the need for specialist advice
• 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 increasing ability to work independently
• have developed a reflective approach to their practice, with an awareness of their developing expertise and an ability to learn from their previous good practice, and clinical errors
• be able to think clearly and to prioritise in clinical decision-making and practice
• have developed skills and strategies to manage their personal emotional reactions effectively so that they stay calm in response to aggression or distress from parents or colleagues
• have developed skills and strategies to cope with uncertainty
• be able to assess accurately the levels of support and supervision that are required by different members of the team they supervise
• be able to delegate duties appropriately to colleagues whom they supervise
• have developed effective problem-solving strategies in clinical and management contexts, for example, where there is a shortage of beds or medical staff or other resources

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

Values and Attitudes

Continuing development from the Level 1 Training document

• understand and follow the principle that all decisions are to be made in the best interests of the child or young person in their care
• 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 where to find legal and ethical guidelines to support their work

• work with colleagues in multi-disciplinary teams to ensure consistency and continuity and a holistic approach to the treatment and care of children and young people

• develop a commitment to a policy of advocacy for a healthy lifestyle in children and young people and for the protection of their rights

• be aware of the ways in which their personal experiences, values and attitudes might affect their professional practice and know when to refer a case to another doctor

Change of wording from the Level 1 Training document

• show (understand the need for) compassion and respect for children, young people and their families

• show that they consider (understand the responsibility of paediatricians to consider) all aspects of a child’s well-being including biological, psychological and social factors

• show that they are (be) aware of and sensitive to the way in which cultural and religious beliefs affect approaches to treatment and care and respond respectfully to the expressed needs of patient and carer

• understand (begin to understand) that young people may have or may develop health care beliefs which are in conflict with those of parents or professionals, when to seek support and where to find legal and ethical guidelines to support their work

• show that they understand (understand), and take into account when agreeing management plans, factors that influence children, young people and parents or carers in their approach to following prescribed management and treatment plans

• show that they are developing (begin to develop) strategies to help children, young people and their families to follow these plans

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

• understand the importance of an open-minded approach to equality and diversity and follow this in their practice

• understand what constitutes bullying and harassment and ensure that they question this behaviour and do not collude with it
• to be able to keep an open mind with regard to others’ health-care beliefs, such as complementary and alternative therapies, and to respect the patient, if not the therapy, as long as it is not harmful to the child
• be aware of the different cultural and religious beliefs held by the local population which impact on attitudes to health and sickness in children- and begin to develop strategies to manage relationships where these beliefs might cause conflict
• have developed a keen self-awareness so that they know when they are ready to take on new challenges, such as breaking bad news to a family, and when they continue to need support and guidance
• have developed an understanding of and a view on debates and controversies in health care (understand the complexity of issues and conflicts in professional practice and have begun to develop strategies to respond)

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

Teaching and Research

Continuing development from the Level 1 Training document
• show honesty and integrity when contributing to peer reviews of colleagues’ teaching or research

Change of wording from the Level 1 Training document
• have developed some (begin to develop a sound understanding and a commitment to the principles and practice of) effective teaching and learning skills in a range of clinical contexts
• show that they understand (understand) their responsibilities to conduct research with honesty and integrity, seeking ethical approval where appropriate and safeguarding the interests of patients
• show that they have understood (begin to understand) basic concepts in research design and methodology including the difference between hypothesis-based and non-hypothesis based studies, and the difference between research and audit
be able to plan a research project effectively under supervision (understand the steps involved in planning)

have developed (begin to develop) critical appraisal skills and can show that they apply these to their reading of the literature, including systematic reviews, reviews of their own teaching and the teaching of others

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

• know about the role of the Caldicott guardian and follow the principles of the data protection act and of confidentiality

• contribute to the training of undergraduates, postgraduate trainees and other professionals such as nurses, teachers and social workers

• participate in departmental teaching programmes, including journal clubs

• have developed (begun to develop) a reflective approach about their experiences of being a trainee in order to ensure positive experiences for trainees now under their supervision

• understand the importance of a positive and constructive approach to mentoring, giving support, guidance and feedback to trainees under their supervision

• be able to write a critical account of clinical practice, showing that they can deal with complex issues systematically and creatively and that when necessary they can write in line with conventions for academic papers

• demonstrate an understanding of when to use more complex statistical tests (understand when to use simple statistical tests and their interpretation) and how to interpret significance

• demonstrate an understanding of how bias and confounding variables may affect the conclusions of clinical research studies

• demonstrate an understanding of how clinical guidelines are produced and how these might be used to guide their own practice (know how clinical guidelines are produced and how they might be used appropriately within the context of clinical practice)

• demonstrate an understanding of how to perform and interpret systematic reviews and understand the principles of meta-analysis (know how Cochrane systematic reviews are developed and the principles of meta-analysis)

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

Continuing development from the Level 1 Training document

• demonstrate the ability to take on differing and complementary roles within the different communities of practice within which they work, in hospitals, in the community, with schools and with social services

Change of wording from the Level 1 Training document

• ensure (understand the need for) open and non-discriminatory professional working relationships with colleagues and be aware of the need to prevent bullying and harassment
• have developed effective organisational skills for themselves and for others, in prioritisation and delegation
• manage (ensure) effective hand-over procedures and clear communications with colleagues to ensure the continuing good medical care of patients

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

• have experience of working with 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
• have developed confidence to make decisions within a team
• be able to take on a leadership role in a multi-disciplinary team when appropriate, for example at a discharge meeting and know when it may be inappropriate to do so
• ensure effective discharge procedures to community and primary care services
• to take on an advocacy role with regard to the best interests of the patient; to ensure appropriate care for patients; to be able to think independently and to challenge decisions or protocols where appropriate
• have gained an understanding of National Service Frameworks (NSF) for children and managed clinical networks, the role of National Institute of Clinical Excellence (NICE), the role of the Royal College of Paediatrics and Child Health, (RCPCH), the Postgraduate Medical Education Training Board (PMETB) and the General Medical Council (GMC) in professional life and in professional regulation
• have developed some leadership skills, for example in communicating the urgency of action in an emergency while enabling teams to remain calm
• be able to recognize and support colleagues who may be under pressure
• have developed some skills and strategies to manage conflict effectively
• have some experience of working within an organisation: attending different committees and meetings, for example College meetings, regional meetings, working parties, Trust meetings, medical staff committees, clinical governance meetings
• know about the structure of large NHS organizations, including management structures, governance, policy and procedures relevant to the care of children
• be able to recognise the qualities of effective management of meetings, such as having clear action points and achievable and recognizable outcomes
• recognise their own working preferences and how these may impact on teamworking

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

Personal Commitment to Professional Standards

Continuing development from the Level 1 Training document
• ensure that they are up-to-date in their practice and endeavour to promote evidence-based medicine where possible
• understand how national and local policy initiatives impact on medical practice and social health and well-being
• know the principles of the UN Convention on the Rights of the Child 4, apply these in their own practice and work for the protection of these rights
• demonstrate an understanding of and respect for legal and ethical issues relating to consent and confidentiality in paediatrics, including the Fraser ruling (formerly known as Gillick competence)
• demonstrate responsibility for their own health in so far as it might affect the welfare or safety of patients

Change of wording from the Level 1 Training document
• act with (understand the need for) honesty and know the procedures to follow where there is concern about the professional practice of a colleague which might be putting the health of patients at risk
**Substantial re-wording or new statements of competence for Level 2 Training**

- demonstrate probity in personal and professional life
- know the law with regard to consent to treatment and the right to refuse treatment, and be aware of variability in Scotland, Wales and Northern Ireland, continuing changes in the law and its interpretation
- begin to evaluate and generate (*be familiar with and follow*) local and national clinical guidelines and protocols in paediatric practice and recognise the individual patient’s needs when using them
- participate in clinical governance activities, and support colleagues in their participation
- show a commitment to continuing professional development, which would involve not only seeking appropriate training opportunities, but also responding to complaints and enquiries as useful learning opportunities
- be aware of local processes for dealing with and learning from clinical errors
- be aware of patient safety issues and the importance of the prevention of nosocomial infection

*(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 these sections *Good Medical Practice in Paediatrics and Child Health*² (2002) London: Royal College of Paediatrics and Child Health. Online at [www.rcpch.ac.uk/publications/recentpublications.html](http://www.rcpch.ac.uk/publications/recentpublications.html)

**Communication Skills in Paediatrics**

*Continuing development from the Level 1 Training document*

- be able to demonstrate courtesy to families, colleagues and members of the multi-disciplinary team at all times
- show patience and sensitivity in their communications with children and their families and a particular ability to explore their individual perspectives of a problem
- have experience of how to communicate a diagnosis and prognosis effectively to children, where appropriate, young people and their families
Change of wording from the Level 1 Training document

- have developed (begun to develop) effective consultation skills and strategies with babies, young children, adolescents and their families
- demonstrate the ability to (understand the need to) conduct a consultation in such a way that a child or young person and their family feel able to talk about difficult or emotional issues
- have developed (begun to develop) active listening skills 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 is felt to be vulnerable
- have developed strategies to (know how to) respond appropriately, and where to find assistance, in cases where a child or family may not all speak English or where there is an impairment such as hearing loss that may affect understanding
- demonstrate an ability (have understood the need) 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
- have developed (begun to develop) appropriate responses and empathy for children, young people and their families experiencing difficulty and distress, for example, in the case of angry or dissatisfied relatives (in the case of a child who is dying)
- have begun to develop (understand the need to develop) strategies for careful and appropriate use of language in difficult and challenging circumstances, eg at the birth of a baby with disabilities or in confrontation with colleagues
- understand the limitations of their competence at this stage of their training and be willing to (that they should) seek help in managing sensitive and complex situations

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

- be able to liaise effectively with consultants in order to obtain appropriate advice about clinical management
- be able to liaise effectively with colleagues in multi-agency teams, such as education and social services
- have begun to develop the confidence to be firm and diplomatic in difficult situations, for example when dealing with angry parents
- be able to advise families appropriately about complaints procedures
have developed skills for effective written communications with patients and their families, with colleagues and with other professional organizations.

be thorough in making accurate records and reports that will subsequently withstand scrutiny in a Court of law or a complaints tribunal, and encourage others to do the same.

know when and why to share worrying information about a child or young person, when and how to ask for consent to share this information, and how to communicate concerns clearly, in person, by phone or by letter.

know how to write reports about alleged child abuse for social services or the Courts, making use of more experienced colleagues when necessary.

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 making use of more experienced colleagues when necessary.
3. General Clinical Competences

Development

Continuing development from the Level 1 Training document

- understand the variations in relationship between physical, emotional, intellectual and social factors and their influence on development and health
- recognise deviations from normal patterns of development
- be able to identify abnormal patterns of development
- understand the need for further assessment and investigation and how to access these
- know and understand the principles of screening and monitoring
- be able to assess and monitor development using appropriate tools
- recognise that child neglect or abuse might affect a child’s development

Change of wording from the Level 1 Training document

- understand (be familiar with) the patterns of normal development from birth to adulthood
- know the causes of disability, how disability might affect clinical examination and assessment and be able to participate in (understand the need for) a multi-disciplinary approach to management

Emotional development

Continuing development from the Level 1 Training document

- know the factors which influence healthy emotional development
- understand the emotional impact of illness and hospitalisation on children and their families
- be able to assess parenting skills and recognise indications of unsatisfactory or unsafe parenting
- recognise and know the principles of managing common behavioural problems
- understand a child’s need for opportunities to play and to learn at different ages
- understand the emotional dimensions of eating disorders
- recognise the need for specialised input in cases of serious emotional distress or mental illness
recognise pointers to fabricated and induced illnesses and know how to seek help
understand and recognise somatisation disorders

Social development

Continuing development from the Level 1 Training document
know the factors that influence social development
understand the impact of autistic spectrum disorders and other organic disorders on social development

Change of wording from the Level 1 Training document
demonstrate (develop) skills to prevent disruptive or antisocial behaviour in children, families and adolescents in clinical settings and to respond to them if they occur

Educational development

Continuing development from the Level 1 Training document
know the factors which influence intellectual development
understand the vulnerability of a child with learning difficulties
understand the impact of learning difficulty on social and emotional behaviour

Change of wording from the Level 1 Training document
contribute to (know about) the processes of formal statutory assessment of children with possible special educational needs and other educational strategies to support learning and development

Growth and Nutrition

Continuing development from the Level 1 Training document
be able to describe a child’s nutritional status in terms of balance, body composition and function
understand the range of factors, biological, psychological and social which influence normal growth and puberty
understand the importance of emotional factors in feeding and nutrition, in particular in faltering growth (non-organic failure to thrive)
understand the relationship between nutritional status and disease
understand the effects of fetal growth restriction on long-term health
• understand the effects of obesity on long-term health
• understand the basic physiology of breast-feeding
• recognise common breast-feeding problems and refer appropriately
• be able to advise a mother about the benefits and risks associated with infant feeding
• be able to advise a mother about appropriate complementary feeding
• be able to identify families needing nutritional support or advice
• recognise cultural and religious issues related to nutrition

Change of wording from the Level 1 Training document
• understand the differing nutritional requirements for healthy and sick children and advise on nutritional needs
• apply (know about) the principles of routine dietary supplementation
• be able to advise on interventional strategies involved in weight reduction
• be able to monitor growth using appropriate tools, including in disabled children

Substantial re-wording or new statements of competence for Level 2 Training
• know about the principles and methods of alternative methods of feeding eg gastrostomy, nasogastric tube and common problems that may arise
• understand environmental factors contributing to obesity and how these might be altered
• describe the effects of malnutrition on clinical outcomes and be able to refer appropriately to the nutritional support team

Adolescence

Continuing development from the Level 1 Training document
• understand the variations in relationship between physical, emotional, intellectual and social factors and their influence on adolescent development
• understand the different specific and changing health needs of adolescents as inpatients and outpatients
• recognise risk-taking behaviours, particularly those which pose a threat to chronic disease management
• understand and respond appropriately to episodes of self-harm in adolescents
• know about national policies for reduction of teenage pregnancy
• know about contraceptive and sexual health issues and where appropriate advice might be sought
- be aware of issues relating to gender and sexual identity
- understand and follow the principles and legal aspects of consent and confidentiality

*Change of wording from the Level 1 Training document*

- understand (know about) and assess, under supervision, normal and abnormal pubertal development
- understand (know about) issues around transition from paediatric to adult care in adolescents with chronic conditions and disabilities

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

- be able to engage effectively with adolescents
4. Speciality-specific Competences

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.

Behavioural Paediatrics

Continuing development from the Level 1 Training 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 Training document

- have developed (begun to develop) 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 (begun to develop) strategies and skills to support and engage parents of children with emotional or mental health difficulties
- know about the effects of developmental difficulties and physical diseases on behaviour and vice versa and be able to recognise when this occurs
- 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 manage (know the principles of) common behaviour problems such as temper tantrums, sleep problems, the crying baby, feeding difficulties, oppositional behaviour, enuresis and encopresis, school refusal
- are able to undertake (know about) 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

Cardiology

Continuing development from the Level 1 Training 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 Training document
- be able to provide advanced life support and lead the team at a (respond appropriately to) cardiac arrest

Substantial re-wording or new statements of competence for Level 2 Training
- be able to identify common ECG abnormalities
### Cardiology

#### Acute Presentations

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyanosis</td>
<td>know the normal fetal circulation and transitional changes after birth, know the anatomy of the common causes of cyanotic heart disease</td>
<td>be able to differentiate between cardiac and non-cardiac causes of cyanosis, be able to initiate emergency management, be able to describe clinical signs and investigations accurately and effectively with a cardiologist, recognise when treatment is urgent</td>
</tr>
<tr>
<td>Heart Failure, including cardiac conditions which present with shock</td>
<td>understand the causes of heart failure</td>
<td>be able to initiate appropriate investigations and treatment</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>know the causes of arrhythmias</td>
<td>be able to recognise common arrhythmia on ECG, be able to initiate emergency treatment in arrhythmias such as paroxysmal supraventricular tachycardia</td>
</tr>
<tr>
<td>Infective Endocarditis</td>
<td>know when prophylaxis against endocarditis is indicated, know the causes of endocarditis</td>
<td>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</td>
</tr>
</tbody>
</table>
### Cardiology

#### Outpatient Presentations

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

### Child Protection and Children in Special Circumstances

*(Social Paediatrics)*

*Continuing development from the Level 1 Training 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
A Framework of Competences for Level 2 Training in Paediatrics - October 2005

- 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 Training 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 (recognise and outline) 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 *(have some familiarity with the roles of)* and understand the roles of allied health professionals and other agencies in the support of children and families

- understand the work of *(be aware 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
### A Framework of Competences for Level 2 Training in Paediatrics - October 2005

#### Child Protection and Children in Special Circumstances

**Acute Presentations**

<table>
<thead>
<tr>
<th>The child presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical injury</strong></td>
<td>know how to assess in relation to history, developmental stage and ability</td>
<td>be able to initiate appropriate investigations</td>
</tr>
<tr>
<td></td>
<td>know appropriate investigations when child abuse is a possibility, e.g. skeletal survey when appropriate</td>
<td>be able to recognise new and old fractures on an X-ray</td>
</tr>
<tr>
<td></td>
<td>be aware of the impossibility of dating bruising</td>
<td>be able to initiate a multi-disciplinary investigation in consultation with a more experienced colleague</td>
</tr>
<tr>
<td><strong>Head injury</strong></td>
<td>know about acute and chronic presentations of subdural haemorrhage</td>
<td>be able to perform fundoscopy and recognise retinal haemorrhage</td>
</tr>
<tr>
<td></td>
<td>know that this may cause symptoms mistaken as having a metabolic or infective cause in an infant</td>
<td>be able to initiate emergency management and urgent investigations</td>
</tr>
<tr>
<td></td>
<td>know the appropriate investigations and involvement of other disciplines, e.g. ophthalmology, radiology</td>
<td>be able to co-operate in multi-disciplinary and multi-agency working</td>
</tr>
<tr>
<td></td>
<td>know that retinal haemorrhages may be difficult to detect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>know that, when there is suspicion of non-accidental head injury, an ophthalmologist should be involved</td>
<td></td>
</tr>
</tbody>
</table>
### A Framework of Competences for Level 2 Training in Paediatrics - October 2005

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

### Child Protection and Children in Special Circumstances Outpatient Presentations

<table>
<thead>
<tr>
<th>The child presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faltering growth</td>
<td>be aware of the high incidence of a non-organic cause</td>
<td>be able to instigate appropriate investigations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>be able to institute multi-agency involvement with the help of an experienced colleague.</td>
</tr>
</tbody>
</table>
| **Soiling/wetting** | know that this can be a presentation of emotional abuse or neglect sometimes in association with other forms of abuse, including sexual abuse  
know the other physical, psychological or maturational problems leading to soiling and wetting | be able, with appropriate history and observations, to elucidate factors within the child’s life that may be causing these problems |
| **Vaginal discharge** | know that this may be a presentation of sexual abuse  
know when an expert genital examination is needed and the role of colposcopy as part of that  
know about the many other causes of vaginal discharge | know when to consult with a senior colleague experienced in sexual abuse when there is any question of this |
| **Behavioural change** | know the association of this with abuse, including emotional abuse, neglect, and sexual abuse | be able to take a history to elucidate social and emotional factors that may be involved  
be able to seek the help of a senior colleague |
| **Repeated or bizarre physical symptoms** | know the possible signs of factitious and induced illness  
know how to recognise the over-anxious parent  
know the pathways to gather medical, educational and social information on the child | be able to refer to a senior experienced colleague |
Child Public Health

Continuing development from the Level 1 Training 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 Training document

- understand (be aware of) 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 (be aware of) 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 (be aware of) the indices of social deprivation
- understand and be able to contribute to (be aware of the principles of) 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
- begin to use (understand) principles of evaluation, audit, research and development and standard-setting in improving quality

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

- be able to conduct an audit of screening, health promotion or service delivery under supervision
- understand the principles of immunisation programmes, national and local structures that deliver immunisation programmes, and how they might be monitored and audited
### Child Public Health Acute Presentations

<table>
<thead>
<tr>
<th>Topic</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening and surveillance</td>
<td>know about screening and surveillance programmes, <strong>including their implementation and evaluation</strong></td>
<td>be able to explain specific screening issues to parents and organise these tests as necessary</td>
</tr>
<tr>
<td></td>
<td>know about conditions currently screened for</td>
<td>be able to conduct developmental examinations at different ages</td>
</tr>
<tr>
<td></td>
<td>understand the ethical dilemmas posed by screening</td>
<td><strong>be able to refer appropriately when required</strong></td>
</tr>
<tr>
<td>Health promotion</td>
<td>understand the importance of evidence to support health promotion activities</td>
<td><strong>be able to incorporate health promotion activities in their practice</strong></td>
</tr>
<tr>
<td></td>
<td>know the role of health promotion programmes, for example, to prevent dental decay, smoking, accidents, obesity, sudden infant death</td>
<td>be able to advise parents on avoiding risks for children</td>
</tr>
<tr>
<td></td>
<td><strong>be able to conduct developmental examinations at different ages</strong></td>
<td>include health promotion messages during the consultation where appropriate</td>
</tr>
<tr>
<td></td>
<td><strong>be able to refer appropriately when required</strong></td>
<td><strong>be able to contribute to health promotion programmes</strong></td>
</tr>
<tr>
<td>Public Health and epidemiology</td>
<td><strong>understand</strong> population statistics and know how they might be used in service development</td>
<td>know the principles of how to conduct population studies</td>
</tr>
<tr>
<td></td>
<td>understand the role of public health doctors in commissioning NHS services</td>
<td>be able to evaluate evidence and critique clinical research papers</td>
</tr>
<tr>
<td></td>
<td>understand good study design</td>
<td></td>
</tr>
<tr>
<td>Accidents and injuries</td>
<td>understand the epidemiology of injuries in children and young people</td>
<td>be able to recognise when injury may be non-accidental and to assess that injury</td>
</tr>
<tr>
<td></td>
<td><strong>know about effective injury prevention initiatives</strong></td>
<td>be able to recognise and treat accidental ingestion and deliberate self-poisoning</td>
</tr>
<tr>
<td></td>
<td>know about the sequelae of injury</td>
<td>be able to advise parents on injury prevention and contribute to local injury prevention programmes</td>
</tr>
</tbody>
</table>
Child Public Health
Acute Presentations

| Immunisation                                                                 | understand passive and active immunisation                                                                                                                                                                                                                                                                                                                                 | be able to advise parents and professionals about commonly referred immunisation problems                                                                                                                                                                                                                   | be able to contribute to immunisation programmes by contributing to training and auditing outcomes                                                                                                                                                                                                 | know where and from whom to seek advice for the most complex histories about immunisations                                                                                                                                                                                                 |
|                                                                             | understand the principles and the rationale behind the national immunisation policy for children in Britain                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |
|                                                                             | know about immunisation programmes and schedules in the UK and elsewhere                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |
|                                                                             | understand the role of the Immunisation Coordinator                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |
|                                                                             | know the indications, contraindications and complications of routine and specific childhood immunisations                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                           |

Dermatology

Continuing development from the Level 1 Training 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 Training document

- understand (be aware of) the different potencies of topical steroids and of their side effects
- know (be aware of) the common causes of hair loss and hypertrichosis
### Dermatology
#### Acute Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin failure e.g. toxic epidermal necrolysis, staphylococcal scalded skin syndrome and epidermolysis bullosa</td>
<td>know the features and management of staphylococcal scalded skin syndrome &lt;br&gt;be aware of the rarer causes of skin failure</td>
<td>be able to assess and to start initial treatment promptly &lt;br&gt;recognise when to consult dermatology and ophthalmology specialists</td>
</tr>
<tr>
<td>Skin infections</td>
<td>know the causal bacteria, features, complications and management of cellulitis including periorbital cellulitis</td>
<td>recognise when to consult ophthalmology and ENT – specialists &lt;br&gt;recognise and be able to treat scabies, pediculoses, and common viral and fungal skin infections &lt;br&gt;<strong>recognise the features of and manage infected eczema and eczema herpeticum</strong></td>
</tr>
<tr>
<td>Cutaneous drug reactions</td>
<td>be aware of the different patterns of drug reaction and of the common precipitants</td>
<td>be able to assess mucosal involvement &lt;br&gt;recognise when to consult dermatology and ophthalmology specialists &lt;br&gt;<strong>recognise serious drug reactions e.g. Stevens-Johnson syndrome</strong></td>
</tr>
<tr>
<td>Erythema nodosum</td>
<td>know the causes of erythema nodosum</td>
<td>recognise the features in the presentation which suggest significant pathology and which indicate a particular diagnosis</td>
</tr>
</tbody>
</table>
### Dermatology

#### Outpatient Presentations

<table>
<thead>
<tr>
<th>Erythematous rash and fever</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>know the causes of fever and an erythematous rash with or without desquamation</td>
<td>be able to recognise and institute treatment of Kawasaki syndrome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>be aware of complications and know when to refer, for example, to a cardiologist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>recognise and initiate management of rare but serious causes e.g. toxic shock syndrome</td>
<td></td>
</tr>
</tbody>
</table>

**The patient presents with Knowledge and understanding Skills**

<table>
<thead>
<tr>
<th>Eczema and seborrheic dermatitis</th>
<th>know the common treatments for eczema and the reasons for treatment failure</th>
<th>be able to manage mild eczema and seborrheic dermatitis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>be able to advise parents about these conditions</td>
<td></td>
</tr>
</tbody>
</table>

### Diabetes and Endocrinology

*Continuing development from the Level 1 Training document*

- 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
- 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
# Acute Presentations

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>A child presents ‘well’ with diabetes mellitus</td>
<td>know the pathophysiology of diabetes mellitus&lt;br&gt;recognise the early features of this presentation&lt;br&gt;know the principles of diabetes management including commonly used insulin regimens&lt;br&gt;know about the long term complications of diabetes and about ways to reduce the risks of these occurring</td>
<td>be able to explain this condition to parents&lt;br&gt;be able to liaise with the children’s diabetes team&lt;br&gt;be able to give basic advice about diet and exercise</td>
</tr>
<tr>
<td>Diabetic ketoacidosis</td>
<td>understand the pathophysiology of diabetic ketoacidosis&lt;br&gt;know how to treat and monitor progress</td>
<td>be able to recognise the clinical features of this condition&lt;br&gt;<strong>recognise potential complications including cerebral oedema</strong>&lt;br&gt;be able to lead the team when initiating resuscitation and early treatment&lt;br&gt;be able to manage ongoing treatment safely with guidance</td>
</tr>
<tr>
<td>Hypoglycaemia</td>
<td>know the causes, complications and treatment in the neonatal period and beyond&lt;br&gt;know that blood glucose is an urgent investigation in patients with impaired conscious level&lt;br&gt;be aware of the clinical features which would suggest hypopituitarism or adrenal insufficiency&lt;br&gt;<strong>know when to consider rare causes of hypoglycaemia and what investigations to perform during the hypoglycaemic episode</strong></td>
<td>be able to take relevant investigations required for the confirmation of cause&lt;br&gt;be able to assess whether any change to insulin treatment is needed to prevent recurrence in diabetic patients&lt;br&gt;<strong>be able to treat hypoglycaemia safely and effectively with intravenous glucose or glucagon where appropriate</strong>&lt;br&gt;recognise the need to inform the diabetes team of serious hypoglycaemia in their patients</td>
</tr>
</tbody>
</table>
Neonatal thyrotoxicosis  | know the cause of this condition and its natural history  | recognise this presentation and the need for urgent treatment  
Ambiguous genitalia  | be aware of the causes of this presentation  
| understand the features of congenital adrenal hyperplasia and its early management  | recognise the extreme sensitivity of this presentation and of the need to seek urgent help from senior colleagues with regard to management and counselling parents  
| be able to give appropriate information to parents whilst awaiting help from senior colleagues  

**Diabetes and Endocrinology Outpatient Presentations**

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
</table>
| **Short and tall stature**  
**Abnormal rates of growth**  | know the causes of short stature or slow growth and the characteristics of these conditions  
| know when short stature needs to be investigated  
| understand and know the rationale behind the baseline and subsequent investigations  
| be aware of treatments that are available for pathological short stature  
| know about the causes of tall stature  | be able to explain to patients and parents non-serious causes of short stature eg genetic short stature, constitutional delay and hypothyroidism  
| recognise the need to rule out Turner’s syndrome as a cause of short stature in girls  |

| **Delayed and early puberty**  | know the causes and possible investigation of early and late puberty  | recognise when the cause may be pathological rather than physiological  |

| **Goitre and thyroid disorders**  | know the causes of congenital and acquired hypothyroidism  
| know about the national screening programme for hypothyroidism  
| understand the need for precise treatment and monitoring during infancy and early childhood  
| know the associations of autoimmune diseases and of trisomy 21  | be able to assess thyroid status  
| **be able to interpret thyroid function tests on and off treatment**  
| be able to recognise thyrotoxicosis  |
Gastro-enterology and Hepatology

- 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
- understand the role of interventional procedures e.g., endoscopy or colonoscopy in the investigation of gastro-enterological disorders

**Acute Presentations**

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute abdominal pain</td>
<td>know the causes of acute abdominal pain</td>
<td>recognise when to request a surgical opinion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>recognise conditions which require urgent intervention e.g., intussusception</td>
</tr>
<tr>
<td></td>
<td></td>
<td>recognise the need to consider acute appendicitis in very young children</td>
</tr>
<tr>
<td></td>
<td></td>
<td>recognise signs of pain in an infant or small child</td>
</tr>
<tr>
<td>Condition</td>
<td>Knowledge</td>
<td>Recognition</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Acute diarrhoea and/or vomiting</td>
<td>know the causes of the symptoms of acute diarrhoea and vomiting</td>
<td>recognise features in the presentation which suggest serious pathology eg haemolytic uraemic syndrome, appendicitis, intestinal obstruction</td>
</tr>
<tr>
<td></td>
<td><strong>understand the scientific principles for oral and intravenous fluid therapy</strong></td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td>know the causes of neonatal and childhood jaundice</td>
<td>investigate appropriately and know when to refer to specialist services</td>
</tr>
<tr>
<td>Upper and lower gastro-intestinal bleeding</td>
<td>know the causes of upper and lower gastro-intestinal bleeding</td>
<td>recognise features in the presentation which suggest serious pathology</td>
</tr>
<tr>
<td></td>
<td>understand the potentially life-threatening nature of this presentation</td>
<td></td>
</tr>
<tr>
<td>Abdominal distension</td>
<td>know the causes of abdominal distension</td>
<td>initiate investigation and seek surgical opinion when required</td>
</tr>
<tr>
<td>Acute liver failure</td>
<td><strong>know</strong> the causes of acute liver failure</td>
<td>be able to assess the severity and complications of this condition</td>
</tr>
<tr>
<td></td>
<td>know the management of paracetamol poisoning</td>
<td></td>
</tr>
<tr>
<td>Congenital abnormalities</td>
<td>know the presenting features of congenital abnormalities including tracheo-oesophageal fistula, malrotation, bowel atresias, Hirschsprungs disease, abdominal wall defects, diaphragmatic hernia</td>
<td>institute appropriate emergency treatment, and be able to assess the fitness of the baby and the need to transfer to a specialist centre</td>
</tr>
</tbody>
</table>
Congenital abnormalities cont.. | be familiar with potential associated abnormalities know when ante-natal transfer to a Neonatal Surgical Centre should be considered | 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

### Gastro-enterology and Hepatology
### Outpatient Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic or recurrent abdominal pain</td>
<td>know the possible biological, psychological and social contributing factors in chronic or recurrent abdominal pain&lt;br&gt;&lt;br&gt;know which features suggest that reassurance rather than investigation is needed</td>
<td>recognise features in the presentation that suggest the importance of different aetiologies&lt;br&gt;&lt;br&gt;be able to refer appropriately to psychology when required&lt;br&gt;&lt;br&gt;consider when there might be child protection issues</td>
</tr>
<tr>
<td>Chronic diarrhoea and/or vomiting</td>
<td>know the causes of chronic diarrhoea and/or vomiting&lt;br&gt;&lt;br&gt;be aware of the characteristics of bulimia</td>
<td>be able to initiate investigations</td>
</tr>
<tr>
<td>Constipation with or without soiling</td>
<td>understand the relevance of predisposing conditions eg hypothyroidism, neurodisability, psychosocial problems</td>
<td>be able to follow local and national guidelines for management&lt;br&gt;&lt;br&gt;manage simple constipation with and without soiling&lt;br&gt;&lt;br&gt;recognise when to liaise with more senior paediatricians, specialist nurses, psychologists and psychiatrists</td>
</tr>
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<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Dysphagia</strong></td>
<td>know the causes of dysphagia</td>
<td>be able to distinguish between organic and functional dysphagia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Malabsorption</strong></td>
<td>know the causes of malabsorption including coeliac disease and cystic fibrosis and its consequences</td>
<td>be able to explain and initiate investigations, nutritional assessment, dietary principles and liaise appropriately with the dietician</td>
</tr>
<tr>
<td></td>
<td>understand the principles of treatment of the different types of malabsorption</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Malnutrition</strong></td>
<td>know the causes of malnutrition including organic and non-organic causes</td>
<td>be able to assess nutritional status</td>
</tr>
<tr>
<td></td>
<td>be familiar with the consequences of malnutrition</td>
<td>be able to initiate investigations to establish the diagnosis and to detect nutritional deficiencies</td>
</tr>
<tr>
<td></td>
<td>know the principles of enteral and parenteral nutrition support</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Iron deficiency anaemia</strong></td>
<td>know the causes of iron deficiency anaemia including poor diet, bleeding, malabsorption</td>
<td>be able to manage iron deficiency anaemia</td>
</tr>
<tr>
<td></td>
<td>understand factors which predispose to dietary iron deficiency anaemia</td>
<td>be able to counsel parents about preventing dietary iron deficiency</td>
</tr>
<tr>
<td></td>
<td>be aware of the consequences of the condition</td>
<td></td>
</tr>
</tbody>
</table>

**Genetics and Dysmorphology**

*Continuing development from the Level 1 Training 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 eg alcohol and drugs

Change of wording from the Level 1 Training document
• recognise (know about) the features of common chromosome disorders
• be able to recognise and investigate (describe the features of a baby or child associated with) common malformation or deformation syndromes and to identify associated anomalies
• begin to participate in (know the processes involved in) establishing and presenting the diagnosis to parents
• be able to give appropriate information to parents whilst awaiting help from senior colleagues
• be able to respond appropriately (know what to do) when the diagnosis of Down’s syndrome is suspected at delivery or on the post-natal wards

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
Haematology and Oncology Presentations

Continuing development from the Level 1 Training 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 Training 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 (be aware of) specialist nurses and members of palliative care teams
- know (be aware of) 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

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaemia</td>
<td>know and understand the causes of anaemia</td>
<td>be able to investigate anaemia and recognise serious underlying pathology</td>
</tr>
<tr>
<td></td>
<td>understand the predisposing factors and consequences of iron deficiency anaemia</td>
<td>be able to manage iron deficiency anaemia</td>
</tr>
<tr>
<td></td>
<td>understand the hereditary basis and clinical features of sickle cell anaemia and the thalassaemias</td>
<td>know how to counsel parents about hereditary anaemias</td>
</tr>
<tr>
<td></td>
<td>understand the long-term implications for families</td>
<td>be able to explain screening for the thalassaemia or sickle cell trait</td>
</tr>
<tr>
<td></td>
<td>know about the potential consequences of haemolytic anaemia</td>
<td>be able to manage sickle cell crisis, including safe administration of fluid and analgesia</td>
</tr>
<tr>
<td>Condition</td>
<td>Competencies</td>
<td>Action and Considerations</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Polycythaemia</td>
<td>know the causes and treatment of polycythaemia in the new-born period</td>
<td>be able to undertake partial plasma exchange transfusion in a new-born infant</td>
</tr>
<tr>
<td></td>
<td>understand why children with cyanotic congenital heart disease are vulnerable to polycythaemia</td>
<td></td>
</tr>
<tr>
<td>Neutropaenia</td>
<td>understand the significance of fever in a neutropaenic patient</td>
<td>be able to manage febrile neutropaenia, following local network guidelines and recognising when to liaise with specialist services</td>
</tr>
<tr>
<td></td>
<td>understand the differing risks of neutropaenia in different conditions and treatment regimens</td>
<td></td>
</tr>
<tr>
<td>Purpura and bruising</td>
<td>know the causes of purpura and bruising</td>
<td>recognise features in the presentation which suggest serious pathology or child abuse</td>
</tr>
<tr>
<td></td>
<td>understand immune mechanisms in vasculitis and in allo- and auto-immune thrombocytopenia</td>
<td>be able to explain Henoch-Schonlein purpura to parents</td>
</tr>
<tr>
<td></td>
<td>be able to explain idiopathic thrombocytopenic purpura (ITP) to parents including when precautions and treatment are necessary</td>
<td>be able to manage acute bleeding in haemophilia and von Willibrands disease</td>
</tr>
<tr>
<td></td>
<td>be able to discuss the need for prophylactic Vitamin K with parents</td>
<td>use genetic counselling services appropriately</td>
</tr>
<tr>
<td>Other haemorrhage due to coagulopathy</td>
<td>know the causes and presentations of haemorrhagic disease of the newborn</td>
<td>be able to discuss the need for prophylactic Vitamin K with parents</td>
</tr>
<tr>
<td></td>
<td>understand the hereditary basis of haemophilia and other coagulation disorders</td>
<td>be able to recognise and treat haemarthrosis in a patient with haemophilia and be aware of the need to treat urgently, with appropriate advice</td>
</tr>
</tbody>
</table>
| Leukaemia | know the different types of leukaemia and their prognoses  
recognise and understand the clinical manifestations of leukaemia | be able to recognise and initiate investigations to diagnose leukaemia  
be able to recognise the immediate dangers of leukemia to the newly presenting child  
be able to follow local and national protocols in treating leukaemia and associated infections |  
| Lymphomas | know the clinical features of Hodgkin’s disease and non-Hodgkin’s lymphoma  
know the features which suggest lymphadenopathy may be malignant and how it might be investigated | be aware of staging and protocols for treatment |  
| Other solid tumours | know about the clinical presentation, treatment and prognosis of nephroblastoma and neuroblastoma  
be aware of the clinical features and investigation findings of other solid tumours | be aware of staging and protocols for treatment  
be able to recognise the presenting features of these tumours |  
| Transfusion | understand the risks of administering blood products  
know the indications for irradiated blood products  
recognise the concerns of some groups in society in relation to blood products | follow transfusion procedures correctly  
explain the risks and benefits  
order blood products appropriately  
manage transfusion reaction |
Infection, Immunology and Allergy

Continuing development from the Level 1 Training 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 e.g. 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 immuno-deficiencies

Change of wording from the Level 1 Training 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 (be aware of the policies 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
<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septic shock</td>
<td>understand the pathophysiology of septic shock and its complications&lt;br&gt;know local and nationally agreed guidelines for the management of septic shock including meningococcal disease&lt;br&gt;be aware of the differential diagnosis of septic shock</td>
<td>be able to initiate and lead immediate management of early and advanced features of septic shock&lt;br&gt;be able to lead the team when initiating resuscitation and early treatment&lt;br&gt;be able to liaise effectively with anaesthetic and PICU staff and manage patient until transfer team takes over</td>
</tr>
<tr>
<td>Fever of unknown origin</td>
<td>know the possible causes of fever of unknown origin&lt;br&gt;<strong>understand aspects of social history that are relevant to explore</strong></td>
<td>recognise features in the presentation which suggest serious or unusual pathology and be able to initiate investigations to establish cause</td>
</tr>
<tr>
<td>Anaphylaxis</td>
<td>know the management of anaphylaxis guidelines</td>
<td>be able to lead the team to provide advanced life support&lt;br&gt;be able to liaise effectively with anaesthetic and PICU staff&lt;br&gt;be able to advise on the future risk of anaphylaxis and facilitate an appropriate anaphylaxis management plan by liaising with community teams</td>
</tr>
</tbody>
</table>
### Infection, Immunology and Allergy
#### Outpatient Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent infections</td>
<td>understand why children suffer recurrent infections and <strong>know</strong> which conditions predispose to infection</td>
<td>recognise and <strong>investigate appropriately</strong> features in the presentation which suggest serious underlying pathology</td>
</tr>
<tr>
<td>Food or other allergies</td>
<td><strong>understand</strong> the investigations that are available and their limitations</td>
<td>recognise the potential serious nature of food allergy</td>
</tr>
<tr>
<td></td>
<td>know the features of cows’ milk allergy and its management</td>
<td>advise on the appropriate use of adrenalin</td>
</tr>
<tr>
<td></td>
<td><strong>understand the mechanisms of IgE and non IgE food allergy, food intolerance due to pharmacological effects of food and food intolerance due to enzyme deficiencies</strong></td>
<td><strong>be able to distinguish allergy from intolerance and be able explain to parents</strong></td>
</tr>
</tbody>
</table>

### Metabolic Medicine

*Continuing development from the Level 1 Training 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 Training 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 (failure to thrive)
• be able to initiate (*know when it is appropriate to perform*) metabolic investigations in neonates and children and in urgent situations

*Substantial re-wording or new statements 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
Musculo-skeletal Medicine

Continuing development from the Level 1 Training 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 of 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 Training document

- recognise the presentation of (aware of the presentation of) both chronic fatigue syndrome and generalised idiopathic pain syndromes
- 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 statements 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
### Musculo-skeletal Medicine
#### Acute Presentations

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

### Musculo-Skeletal Medicine
#### Outpatient Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limb pains</td>
<td>know the differential diagnosis of limb pains</td>
<td>be able to distinguish between non-serious causes and serious pathology and manage each appropriately</td>
</tr>
<tr>
<td></td>
<td><strong>know about unexplained illness behaviour and pain syndromes</strong></td>
<td>be able to assess joint laxity</td>
</tr>
<tr>
<td></td>
<td>be aware of hypermobility and rickets</td>
<td></td>
</tr>
</tbody>
</table>

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*A Framework of Competences for Level 2 Training in Paediatrics - October 2005*
<table>
<thead>
<tr>
<th>Condition</th>
<th>Knowledge and Skills</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back pain</td>
<td>be aware of serious causes of back pain</td>
<td>be able to assess clinically whether there is likely to be a serious underlying condition</td>
</tr>
<tr>
<td></td>
<td>understand the investigations that may clarify the diagnosis</td>
<td>be able to initiate appropriate investigations and referral for a neurosurgical or orthopaedic opinion</td>
</tr>
<tr>
<td>Bow legs and knock knees</td>
<td>know the range of normality at different ages</td>
<td>know how to give appropriate advice about these conditions</td>
</tr>
<tr>
<td></td>
<td>be aware of pathological causes of these presentations</td>
<td>be able to recognise the radiological signs of rickets</td>
</tr>
<tr>
<td></td>
<td>know the aetiology, predisposing factors and presentation of rickets</td>
<td></td>
</tr>
<tr>
<td>Torticollis</td>
<td>know the common causes of torticollis</td>
<td>know when to refer simple torticollis in an infant to a physiotherapist</td>
</tr>
<tr>
<td></td>
<td>know about serious causes including posterior fossa tumour, atlanto-axial instability and juvenile idiopathic arthritis</td>
<td></td>
</tr>
<tr>
<td>Inequality of limb length</td>
<td>be aware of the causes of unequal limb length and normal variation</td>
<td>know how to measure limb length</td>
</tr>
<tr>
<td>Multi-system disease</td>
<td>recognise the features which suggest systemic onset of juvenile idiopathic arthritis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>know the differential diagnosis of inflammatory or infective causes of multi-system disease</td>
<td></td>
</tr>
</tbody>
</table>

**Neonatology**

*Continuing development from the Level 1 Training 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 Training document

- be able to recognise and manage (outline the management of) common disorders
- have the knowledge and skills to be able to assess and manage (initiate management of) babies presenting in the neonatal period with problems (in acute, postnatal ward and outpatient settings)
- know and be able to describe (understand) the effects of antenatal and perinatal events on outcome
- know and be able to describe (understand) the pathophysiology of the effects of prematurity
- be able to initiate diagnostic tests for common disorders and to interpret and explain results to parents
- understand the principles of and initiate mechanical ventilation
- be able to perform a reliable assessment of fluid status and adjust (initiate appropriate) 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 (have experience of) basic practical procedures
- recognise (understand) the life-threatening nature of some of these situations and the need (when) to call for help or look for personal support
- understand the implications for families of babies with neonatal problems and begin to support them
- be able to (begin to develop strategies to) communicate sympathetically with parents and have experience of strategies for dealing with their distress or anger
- be able to describe (understand) the long-term sequelae of prematurity and (begin to) recognise those at risk
- be able to initiate and lead advanced (appropriate) resuscitation when required
- be able to prescribe safely (understand the principles and risks of prescribing) for newborn babies and breast-feeding mothers

Substantial re-wording or new statements 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 multidisciplinary 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 when and how babies are transferred for specialist levels of intensive care)

• 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

Neonatology
Acute Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth depression</td>
<td>know the causes of possible outcomes know the statistics of the outcomes of birth depression understand the principles of resuscitation understand the physiology of resuscitation and the responses to it know the criteria necessary before perinatal asphyxia can be diagnosed understand the physiological effects of a hypoxic-ischaemic insult understand the long-term implications of hypoxic-ischaemic damage</td>
<td>be able to provide and lead basic and advanced resuscitation, including intubation be able to carry out resuscitation using bag and mask ventilation and cardiac compressions be able to intubate pre-term babies without direct supervision be able to recognise and initiate management to prevent secondary damage</td>
</tr>
</tbody>
</table>
### Respiratory distress (acute and chronic)
- Understand the common causes of respiratory distress
- Know the relevant investigations
- **Understand the principles and complications of differing ventilation techniques**
- Know the guidelines for surfactant therapy
- Understand the pathophysiology and management of chronic lung disease
- Be aware of the indications for ECMO and nitric oxide therapies
- Know the images needed and safe positions for arterial and venous lines
- Have seen echocardiography where patent ductus arteriosus is diagnosed
- Understand the contribution of patent ductus arteriosus (PDA) to respiratory compromise
- Be able to interpret chest radiographs and act on results
- Be able to administer surfactant
- Be able to initiate and continue to manage respiratory support on a ventilator
- Be able to diagnose pneumothorax and know when chest drainage is indicated
- Recognise when response to management is not optimal and request help from senior colleagues or other services
- Obtain, interpret and react appropriately to blood gas and blood pressure results
- Be able to teach and supervise the insertion of umbilical and peripheral, arterial and venous lines
- Be able to identify signs suggestive of patent ductus arteriosus (PDA) and initiate management
- Know the steps that need to be taken to discharge a baby on long term oxygen to the community

### Cyanosis not of respiratory origin
- Understand the anatomy and implications of cyanotic congenital heart disease
- Understand the pathophysiology of persistent pulmonary hypertension and know about treatment
- Be able to make a likely diagnosis and initiate appropriate investigations and treatment
<table>
<thead>
<tr>
<th>Hypotension</th>
<th>understand the causes and effects understand the rationale for different treatment options</th>
<th>be able to interpret and act on blood pressure measurements</th>
</tr>
</thead>
</table>
| Intra-uterine growth restriction and other nutrition problems             | **understand the importance of nutrition in sick babies**  
understand the importance of breast-milk feeds  
understand the principles of parenteral nutrition  
know the causes of intrauterine and postnatal growth failure  
know about, risk factors for necrotising enterocolitis  
**know about the signs, symptoms and complications of necrotising enterocolitis** | be able to keep and interpret accurate growth records  
be able to prescribe appropriate nutrition and supplements  
be able to insert a percutaneous long line  
**be able to assess appropriate position of percutaneous long line from imaging**  
be able to recognise and begin to address poor growth  
be able to recognise early signs of necrotising enterocolitis and initiate treatment |
| Need for fluid or blood product therapy                                   | know the fluid requirements of pre-term, sick and growth-restricted babies  
know the causes of abnormal coagulation  
**know when irradiated blood products are indicated**  
know the indications for therapy with blood products | be able to assess fluid balance  
**be able to act to correct fluid balance abnormalities**  
**be able to prescribe blood product transfusions**  
be able to test for and recognise bleeding disorders  
**be able to initiate treatment for bleeding disorders** |
| Abnormal neurological status, including seizures                         | understand the aetiology and prognosis of abnormal neurological status  
know the stages of periventricular haemorrhage and leucomalacia | be able to perform a neurological assessment  
be able to recognise common abnormalities in cranial ultrasound scans |
| Cont.. | know about the management of post-haemorrhagic hydrocephalus | have had some experience of performing cranial ultrasound |
| | know the possible causes and effects of seizures | be able to make a likely diagnosis and initiate management of seizures |
| | know the possible causes of abnormal tone | have experience of how bad news is communicated to parents |
| Serious congenital anomalies | understand the underlying pathology | be able to recognise serious abnormalities |
| | understand the use of antenatal diagnosis and the role of fetal medicine | be able to diagnose common syndromes |
| | **understand the role of fetal medicine and interventions that are available** | be able to initiate appropriate tests |
| | be aware of surgical interventions | be able to respond to parents’ immediate questions |
| | 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 | have participated in interviews where a consultant has given bad news to parents |
| | | **be able to refer appropriately to parent support groups and to community services before discharge** |
| Sepsis | understand the importance of timely treatment, know the range of treatments and the likely pathogens | anticipate early signs of sepsis and initiate appropriate anti-microbial therapy and supportive management |
| | know about nosocomial infection | practise effective infection control |
| The dying baby | understand the ethical principles involved | be able to communicate sympathetically with parents |
| | **understand the ethical principles in withdrawing or withholding care from an infant** | be able to communicate sympathetically with staff |
| | know about terminal care and bereavement counselling | be able to deal with personal stress and know when to look for support |
### Postnatal Ward and Outpatient Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
</table>
| Jaundice                  | know the investigations that will diagnose the causes of conjugated and unconjugated hyperbilirubinaemia  
know the appropriate management  
know how and when to undertake an exchange transfusion | be able to diagnose haemolytic jaundice  
be able to manage haemolytic jaundice  
be able to prescribe phototherapy appropriately  
anticipate the need for an exchange transfusion appropriately  
be able to undertake a full exchange transfusion under supervision  
be able to investigate and manage prolonged neonatal jaundice appropriately  
recognise features which suggest serious pathology |
| Feeding                   | understand the importance of breast-feeding  
know the local policies on feeding  
know the causes of feeding problems | be able to support and advise breast-feeding mothers  
be able to make appropriate recommendations to address feeding problems and faltering growth (failure to thrive) |
| Infants of diabetic mothers | understand the physiology  
know the likely complications  
know when admission to a neonatal unit is indicated | be able to interpret blood glucose estimations  
be able to anticipate problems early and manage appropriately |
| Congenital abnormalities  | know the common diagnoses and the likely prognosis of minor congenital abnormalities  
know about common presentations of congenital cardiac disease and which need urgent action | be able to advise parents appropriately  
be able to ensure that referral to an appropriate specialist or service occurs |
### Disordered development

<table>
<thead>
<tr>
<th>Competence</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>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</td>
<td>be able to perform a developmental assessment</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>be able to perform a neurological assessment</td>
<td>be able to make a timely and appropriate referral to the multidisciplinary team</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>understand the causes and natural history of conditions causing disordered development</td>
<td>be able to perform a neurological assessment</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>understand current theories about the pathophysiology of cerebral palsy</td>
<td>be able to perform a neurological assessment</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>understand current theories about retinopathy of prematurity and sensori-neural hearing loss and how these conditions may be prevented</td>
<td>be able to perform a neurological assessment</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>understand the common complications of prematurity and how to access expert assessment and management</td>
<td>be able to perform a neurological assessment</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
</tbody>
</table>

### Screening

<table>
<thead>
<tr>
<th>Competence</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>know the range of screening tests used</td>
<td>be able to explain the implications of a screening test to parents</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>know about the universal Newborn Hearing Screening Programme</td>
<td>order or perform such tests appropriately</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>know about retinopathy and cataract screening</td>
<td>be able to examine the newborn effectively</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>understand the difference between a screening and a diagnostic test</td>
<td>be able to perform clinical screening tests</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>understand the investigations that will follow</td>
<td>be able to explain the difference between a screening test and a diagnostic test to parents</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>know about developmental dysplasia of the hip</td>
<td>be able to explain the difference between a screening test and a diagnostic test to parents</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
<tr>
<td>know the management of developmental dysplasia of the hip</td>
<td>be able to explain the difference between a screening test and a diagnostic test to parents</td>
<td>have seen examples of the effect of developmental difficulties on families</td>
</tr>
</tbody>
</table>

## Nephro-urology

*Continuing development from the Level 1 Training 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 Training 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

Nephro-urology
Acute Presentations

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nephrotic syndrome</td>
<td>understand the complications of the nephrotic state</td>
<td>be able to advise parents on long-term management and complications of treatment</td>
</tr>
<tr>
<td></td>
<td>understand the principles of the pharmacological, dietary and fluid management</td>
<td>assess features in the presentation which suggest serious or significant pathology</td>
</tr>
<tr>
<td></td>
<td>understand the investigations including the indication for renal biopsy</td>
<td></td>
</tr>
<tr>
<td>Acute nephritis</td>
<td>know the aetiology, pathophysiology and immunological basis of glomerulonephritides and vasculitides</td>
<td>recognise features in the presentation which suggest serious or significant pathology</td>
</tr>
<tr>
<td></td>
<td>understand the investigations that will differentiate between the causes</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>know the features that are prognostically significant</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>know the range of immunosuppressive therapies that may be used in these conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Competencies</td>
<td>Actions</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Acute renal failure</td>
<td>know the causes of acute renal failure</td>
<td>be able to assess and initiate management of life-threatening events</td>
</tr>
<tr>
<td></td>
<td>understand the investigations that may differentiate between these causes</td>
<td>eg hyperkalaemia</td>
</tr>
<tr>
<td></td>
<td>know the features of haemolytic uraemic syndrome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>understand the methods to correct fluid and biochemical abnormalities seen in renal failure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>know the indications for dialysis</td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>know the techniques of blood pressure measurement</td>
<td>be able to interpret blood pressure measurements</td>
</tr>
<tr>
<td></td>
<td>know the causes of hypertension and the principles of treatment</td>
<td>be able to identify complications</td>
</tr>
<tr>
<td></td>
<td>be able to interpret blood pressure measurements</td>
<td>be able to initiate management under supervision</td>
</tr>
<tr>
<td>Acute scrotal pain</td>
<td>know the differential diagnosis of this symptom</td>
<td>be able to recognise the important causes of acute scrotal pain</td>
</tr>
<tr>
<td></td>
<td>be able to recognise the important causes of acute scrotal pain</td>
<td>be able to identify children who require urgent surgical referral</td>
</tr>
<tr>
<td></td>
<td>be able to initiate management under supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>be able to liaise with specialists effectively</td>
<td></td>
</tr>
<tr>
<td>Neonate with history of abnormal antenatal ultrasound of the renal tract</td>
<td>understand the causes and management of antenatal hydronephrosis</td>
<td>be able to recognise when to refer to a nephrologist or urologist</td>
</tr>
<tr>
<td></td>
<td>know about the causes of echogenic or cystic kidneys</td>
<td>be able to give basic explanation of the problem, management and prognosis to parents ante- or post-natally</td>
</tr>
<tr>
<td></td>
<td>know about the inheritance patterns of renal abnormalities detected in fetal life</td>
<td></td>
</tr>
<tr>
<td>Stones</td>
<td>know the causes of stone formation</td>
<td>be able to recognise presenting features</td>
</tr>
<tr>
<td></td>
<td>be able to initiate management under supervision</td>
<td></td>
</tr>
</tbody>
</table>
## Nephro-urology
### Outpatient Presentations

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

Continuing development from the Level 1 Training 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

Change of wording from the Level 1 Training document

• have worked on specific cases (experience of working) with multi-disciplinary teams
• have experience of (understand the need for) 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 (understand the need to work with) other services outside neurology and neurodisability such as child protection, education, services for looked after children and adult services
• have experience of (be aware of) how agencies work together to address how children with health and medical needs are managed at school

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

• have had experience of working in special schools
• 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 distinguish simple developmental delay from developmental disorders and to manage simple cases
• 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
• 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 aware of the requirement to tell parents about these groups
• 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

### Neurology and Neurodisability
**Acute Presentations**

<table>
<thead>
<tr>
<th>The patient presents with</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seizures</strong></td>
<td>know the common causes of seizures in newborn babies and children</td>
<td>be able to initiate treatment for acute continuing seizures</td>
</tr>
<tr>
<td></td>
<td><strong>know about</strong> common epileptic syndromes</td>
<td>be able to refer to intensive care teams appropriately and maintain patient safety until that team takes over</td>
</tr>
<tr>
<td></td>
<td><strong>understand</strong> the links between epilepsy and behaviour problems</td>
<td>be able to form a differential diagnosis</td>
</tr>
<tr>
<td></td>
<td>understand the place and principles of the EEG and neuro-imaging in investigation</td>
<td>be able to decide initial and continuing anticonvulsant therapy in babies and children</td>
</tr>
<tr>
<td></td>
<td>know about the long term implications of epilepsy, <strong>including different epilepsy syndromes and the risk of learning difficulties, accident or sudden death</strong></td>
<td>be able to advise parents about education and safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>work effectively with the multidisciplinary team</td>
</tr>
<tr>
<td><strong>Faints and “funny turns”</strong></td>
<td>be able to formulate a differential diagnosis for faints and “funny turns”</td>
<td>be able to make a likely diagnosis</td>
</tr>
<tr>
<td></td>
<td><strong>be able to initiate</strong> the investigations that may differentiate between these causes</td>
<td>be able to explain likely diagnoses to parents</td>
</tr>
<tr>
<td><strong>Acute focal neurological signs</strong></td>
<td>understand the implications of acute focal neurological signs</td>
<td>be able to demonstrate the signs</td>
</tr>
<tr>
<td></td>
<td>understand the principles of investigation</td>
<td><strong>be able to interpret the signs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>have experience of interpretation of CT and MRI scans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>be able to initiate consultation to give diagnoses to parents</td>
</tr>
<tr>
<td>Area</td>
<td>Knowledge and Skills</td>
<td>Actions</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ataxia, clumsiness and abnormal movement patterns</td>
<td>know the common possible causes of ataxia, clumsiness and abnormal movement patterns</td>
<td>be able to recognise the signs</td>
</tr>
<tr>
<td></td>
<td>know the indications for investigations</td>
<td>recognise which urgent investigations are needed</td>
</tr>
<tr>
<td>Hypotonia, neuropathies and myopathies</td>
<td>know about the common causes of hypotonia, neuropathies and myopathies</td>
<td>be able to demonstrate the signs</td>
</tr>
<tr>
<td></td>
<td>know about the relevant neurophysiological and metabolic investigations</td>
<td>be able to elicit and interpret the signs</td>
</tr>
<tr>
<td></td>
<td>be able to recognise the signs</td>
<td>be able to form a likely differential diagnosis</td>
</tr>
<tr>
<td></td>
<td>be able to elicit and interpret the signs</td>
<td>be able to initiate appropriate tests</td>
</tr>
<tr>
<td>Meningism and altered consciousness</td>
<td>know the likely causes or pathogens of meningism and altered consciousness</td>
<td>assess and manage early presentations of meningitis and encephalitis</td>
</tr>
<tr>
<td></td>
<td>understand the principles of treatment</td>
<td>use a validated coma score</td>
</tr>
<tr>
<td></td>
<td>be aware that organic brain conditions can lead to psychotic symptoms</td>
<td>ensure prophylactic therapy for contacts of meningitis</td>
</tr>
<tr>
<td></td>
<td>know when it is safe to perform a lumbar puncture</td>
<td>assess and initiate management of raised intra-cranial pressure</td>
</tr>
<tr>
<td></td>
<td>know the principles of establishing brain stem death</td>
<td>initiate therapy appropriately</td>
</tr>
<tr>
<td></td>
<td></td>
<td>call for help promptly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>recognise the need for urgent referral to audiology specialists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>after bacterial meningitis</td>
</tr>
<tr>
<td>Neural tube defects and other congenital anomalies</td>
<td>know about antenatal diagnosis of neural tube defects and other congenital anomalies</td>
<td>be able to recognise syndromes</td>
</tr>
<tr>
<td></td>
<td>and their prevention</td>
<td>be able to recognise the signs and symptoms of blocked shunts</td>
</tr>
<tr>
<td></td>
<td>know about the ethical principles involved in management decisions</td>
<td>be able to communicate sympathetically with parents</td>
</tr>
<tr>
<td>Trauma to central and peripheral nervous systems</td>
<td>be aware of the implications of severe head injury and the possibilities for rehabilitation</td>
<td>be able to lead initial acute management and transfer appropriately</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td></td>
<td>know about other neurological trauma such as brachial plexus injury</td>
<td></td>
</tr>
<tr>
<td>Fever or illness in a child with complex disabilities</td>
<td>be aware of the range of diagnostic possibilities, including chest infection, aspiration, gastro-oesophageal reflux, oesophagitis, constipation, hip and joint problems, and dental problems</td>
<td>be able to assess child with complex disabilities who is unwell</td>
</tr>
<tr>
<td></td>
<td>know when and where to get help</td>
<td></td>
</tr>
</tbody>
</table>

### Community and Outpatient Presentations

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

<table>
<thead>
<tr>
<th>Conductive hearing loss</th>
<th>know about the common causes of conductive hearing loss</th>
<th>have experience of hearing tests at various ages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>know the principles of hearing testing at various ages and of management of hearing impairment</td>
<td>be able to recognise when further assessment is required and how to access it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sensorineural hearing loss</th>
<th>know about the risk factors and common causes of sensorineural hearing loss</th>
<th>be able to recognise syndromes and situations where sensorineural hearing loss is likely to occur</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>be able to recognise when further assessment is required and how to access it, including investigations that may be appropriate</td>
<td>be aware of the assessment of sensorineural hearing loss</td>
</tr>
<tr>
<td></td>
<td>be aware of the principles of management, including cochlear implantation, and educational approaches to sensorineural hearing loss</td>
<td>be able to communicate with the child with sensorineural hearing loss</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weakness</th>
<th>know the possible causes of weakness and patterns of presentation</th>
<th>be able to take a relevant history</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>be able to elicit and interpret appropriate signs</td>
<td></td>
</tr>
</tbody>
</table>
### Abnormal head size and shape

- know how to recognise abnormal head shapes and to differentiate between serious and non-serious causes
- know the common causes of hydrocephalus, macrocephaly and microcephaly
- be able to plot and interpret a head growth chart
- be able to reach a likely diagnosis and initiate investigations for abnormal head growth
- know about the insertion and ongoing management of ventricular-peritoneal shunts

### Headache

- know the possible biological, psychological and social factors that can contribute to headache
- be able to recognise when headache may indicate serious illness and arrange prompt investigations
- be able to initiate appropriate investigations and treatment

### Problems of language, vision and hearing

- understand the common causes of sensory impairment, the various tests available and when they are appropriate
- know about the principles of testing
- be able to identify infants and children at risk of language, hearing or visual impairment
- be able to recognise when sensory impairment may contribute to developmental difficulties and to refer appropriately for further assessment

### 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

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**Ophthalmology**

*Continuing development from the Level 1 Training 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 Training document*
• be able to undertake (*know the principles of*) visual acuity testing at various ages

### Ophthalmology

#### Acute Presentations

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
</table>
| 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 |
### Abnormal fundus
- know the normal appearance of the retina
- know the value of fundal examination in suspected child abuse cases and certain developmental syndromes
- be able to identify papilloedema, abnormal vessels and pigmentation
- be able to identify haemorrhage

### Visual impairment
- know the common and preventable causes of visual impairment
- know about the investigations that might be used to find a cause
- know about the specific developmental patterns that occur in the child with visual impairment
- know about educational approaches to the child with visual impairment
- be able to recognise congenital cataract and refer urgently for further management
- have experience of assessment of the child with suspected visual impairment

### Palliative Care

*Continuing development from the Level 1 Training document*

- be familiar with national and local guidelines on withdrawing and withholding treatment
- be aware of legal and ethical issues relating to withdrawing life support
- 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 Training document**
- know about (be familiar with) guidelines on the management of sudden infant death, including the RCPCH Kennedy report

**Substantial re-wording or new statements of competence for Level 2 Training**
- know about the broad definition of palliative care in childhood
- recognise factors which determine when care of a patient becomes palliative

**Respiratory Medicine, with Ear, Nose and Throat**

**Continuing development from the Level 1 Training 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
### Respiratory Medicine with Ear, Nose and Throat
#### Acute Presentations

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

<table>
<thead>
<tr>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>know and be able to apply the British Thoracic Society guidelines for management</td>
<td>be able to assess the severity of an asthma attack&lt;br&gt;be able to institute appropriate emergency treatment&lt;br&gt;<strong>be able to lead treatment of severe asthma and review ongoing treatment before discharge</strong>&lt;br&gt;recognise when more senior help is needed</td>
</tr>
</tbody>
</table>

### Lower respiratory tract infection, including pneumonia and bronchiolitis

<table>
<thead>
<tr>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>know</strong> the causes of respiratory tract infections&lt;br&gt;know appropriate therapies&lt;br&gt;<strong>know</strong> indicators of severity</td>
<td><strong>be able to manage these infections</strong>&lt;br&gt;be able to recognise patients requiring intensive care&lt;br&gt;be able to recognise complications, for example, empyema and manage appropriately</td>
</tr>
</tbody>
</table>

### Respiratory failure

<table>
<thead>
<tr>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>know the indications for ventilation&lt;br&gt;be aware of the agreed resuscitation plans for individual patients</td>
<td><strong>initiate</strong> urgent assessment and treatment including assisted ventilation&lt;br&gt;liaise with more senior paediatricians, anaesthetists and intensivists when appropriate</td>
</tr>
</tbody>
</table>

### Respiratory Medicine with Ear, Nose and Throat

#### Outpatient Presentations

<table>
<thead>
<tr>
<th>The patient presents with:</th>
<th>Knowledge and understanding</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical Lymphadenopathy</td>
<td>know the causes of cervical lymphadenopathy</td>
<td>recognise when investigation and surgical intervention is needed</td>
</tr>
<tr>
<td>Chronic stridor</td>
<td>know the causes of chronic stridor</td>
<td><strong>recognise when and how to investigate</strong></td>
</tr>
<tr>
<td>Asthma</td>
<td>be familiar with the British Thoracic Society guidelines for management of asthma&lt;br&gt;know about patterns of asthma and exacerbating factors</td>
<td>institute age-appropriate individualised management plan for asthma&lt;br&gt;<strong>be able to modify an asthma management plan appropriately</strong></td>
</tr>
</tbody>
</table>
| Asthma cont.. | know the complications of long-term use of medications for asthma | teach children how to use a peak flow meter and diary  
teach and assess inhaler technique  
be aware of what needs to be done to ensure the child has access to emergency treatment at school and other settings |
|-----------------|-------------------------------------------------|-----------------------------------------------|
| Recurrent or chronic chestiness | know the respiratory and non-respiratory causes, including aspiration, of recurrent or chronic chestiness  
knowledge about predisposing conditions such as neuromuscular and skeletal disorders, and immunodeficiency | recognise features in the presentation which suggest serious or unusual pathology eg atypical presentations of cystic fibrosis  
knowledge about the role of bronchoscopy, pH studies and video-fluoroscopy  
knowledge how to perform and interpret basic lung function tests |
| Cystic fibrosis | know and understand the pathophysiology and natural history of cystic fibrosis  
understand the principles of treatment  
understand the diagnostic tests available | work with a multi-disciplinary team, particularly physiotherapy and dieticians |
5. Practical Procedures and Investigations

By the end of Level 2 Training, trainees will:

*Continuing development from the Level 1 Training document*

- 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

*Change of wording from the Level 1 Training document*

- know about (be aware of) the role of complex investigations eg CT and MRI scans and their diagnostic potential and complications
Substantial re-wording or new statements of competence for Level 2 Training

- 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 identify with patients requiring emergency prophylaxis
- 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 2 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 2 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 may need supervision for:

- intubation of extremely immature babies or those with congenital malformation of head and neck
- draining 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

*Continuing development from the Level 1 Training document*

- know and understand the pharmacological basis for treatments
- know the approved indications and justification for prescribing drugs in common paediatric problems
- know how to report adverse side effects
- 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 licensing of medicines for paediatric patients and unlicensed and off-label use
• 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)

Change of wording from the Level 1 Training document:
• be able (know how) to prescribe safely for the newborn, and for children of all ages
• be able (know how) to find out information necessary for safe prescribing through use of paediatric formularies and pharmacy liaison
• know about (be aware of) drug interactions of commonly used drugs (where more than one drug prescribed)
• know about (be aware of) procedures for obtaining consent in children and young people for the administration of drugs
• be able to use (know) 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
References


5. Millenium goals agreed at Millenium Summit 2000 see, for example www.europeintheworld.info
