# When to suspect child maltreatment

National Collaborating Centre for Women's and Children's Health

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**Evidence tables and details of excluded studies are available as separate files.**

# Guideline Development Group membership and acknowledgements

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# Acknowledgements

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- Delphi consensus survey participants (see Appendix C)
- Ruth Gilbert

# Stakeholder organisations

Action for M.E.
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Alder Hey Childrens NHS Foundation Trust
Ambulance Service Association
Association for Clinical Biochemistry
Association for Continence Advice
Association for Improvements in the Maternity Services
Association for Psychoanalytic Psychotherapy in the NHS (APP)
Association of Catholic Nurses of England and Wales
Association of Child Psychotherapists
Association of Dance Movement Therapy UK
Association of Educational Psychologists
Association of Paediatric Emergency Medicine
Association of Professional Music Therapists
Association of Psychoanalytic Psychotherapy in the NHS
Association of Young People with ME
Barnsley Hospital NHS Foundation Trust
Barnsley PCT
Berkshire Healthcare NHS Trust
Birmingham Womens NHS Trust
Bournemouth and Poole PCT
Brighton & Sussex University Hospitals Trust
Brighton and Sussex University Hospitals Trust
British Association for Community Child Health
British Association for Counselling and Psychotherapy
British Association for Sexual Health and HIV
British Association of Art Therapists
British Association of Drama Therapists
British Assoication for the Study & Prevention of Child Abuse & Neglect
British Dental Association
British National Formulary (BNF)
British Nuclear Medicine Society
British Paediatric Mental Health Group
British Paediatric Mental Health Group of the Royal College of Paediatrics and Child Health
British Paramedic Association
British Psychological Society, The
British Society of Paediatric Dentistry
British Society of Paediatric Gastroenterology, Hepatology & Nutrition (BSPGHAN)
British Society of Paediatric Radiology
Buckinghamshire PCT
Calderdale and Huddersfield Acute Trust
Calderdale PCT
Cambridge University Hospitals NHS Foundation Trust (Addenbrookes)
Central Manchester PCT
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Clinical Effectiveness Committee
College of Emergency Medicine
College of Emergency Medicine
Commission for Social Care Inspection
Community Practitioners and Health Visitors Association
Connecting for Health
Consultants in Paediatric Dentistry Group
Conwy & Denbighshire Acute Trust
Cornwall & Isles of Scilly PCT
Department for Communities and Local Government

Department of Health
Department of Health, Social Security and Public Safety of Northern Ireland
Derbyshire Mental Health Services NHS Trust
Det Norske Veritas - NHSLA Schemes
Drinksense
East & North Herts PCT & West Herts PCT
Eaton Foundation
Education and Resources for Improving Childhood Continence
Education Otherwise
Faculty of Dental Surgery
Faculty of Forensic and Legal Medicine
Ferring Pharmaceuticals Limited
Forensic Arts Therapies Advisory Group
Foundation for the Study of Infant Deaths
Greater Manchester West Mental Health NHS Foundation Trust
Guys and St Thomas NHS Trust
Hampshire Partnership NHS Trust
Hampshire Partnership NHS Trust
Harrogate and District NHS Foundation Trust
Health and Safety Executive
Healthcare Commission
Heart of England Acute Trust
Hertfordshire Partnership NHS Trust
KCC Children and Families Directorate
Kingston Hospital NHS Trust
Leeds PCT
Liverpool PCT
Luton & Dunstable Hospital NHS Foundation Trust
Luton PCT
Medicines and Healthcare Products Regulatory Agency (MHRA)
Mental Health Act Commission
Mental Health Nurses Association
Mersey Care NHS Trust
Milton Keynes PCT
National Association for People Abused in Childhood (NAPAC)
National Autistic Society
National Patient Safety Agency (NPSA)
National Public Health Service - Wales
National Safeguarding Children Association for Nurses (NSCAN)
National Society for the Prevention of Cruelty to Children (NSPCC)
National Treatment Agency for Substance Misuse
NCC for Acute Care
NCC for Cancer
NCC for Chronic Conditions
NCC for Mental Health
NCC for Nursing & Supportive Care
NCC for Primary Care
NCC for Women & Children
NCCHTA
NCCHTA
NHS Bedfordshire
NHS Clinical Knowledge Summaries Service (SCHIN)
NHS Direct
NHS Plus
NHS Purchasing & Supply Agency
NHS Quality Improvement Scotland
NHS Sheffield
NICE - CPHE
North East London Mental Health Trust
North Staffordshire Combined Healthcare NHS Trust

North Tees and Hartlepool Acute Trust
Nottinghamshire Acute Trust
Office of the Children's Commissioner
Oxfordshire & Buckinghamshire Mental Health Partnership NHS Trust
Partners in Paediatrics
Partnerships for Children, Families, Women and Maternity
Peach
Peninsula Primary Care Psychology & Counselling Services
PERIGON Healthcare Ltd
Pottergate Centre for Dissociation & Trauma
Public Health Research Group
Queen Mary's Hospital NHS Trust (Sidcup)
Royal College of General Practitioners
Royal College of Midwives
Royal College of Nursing
Royal College of Ophthalmologists
Royal College of Paediatrics and Child Health
Royal College of Pathologists
Royal College of Physicians London
Royal College of Psychiatrists
Royal College of Radiologists
Royal Pharmaceutical Society of Great Britain
Royal United Hospital Bath NHS Trust
SACAR
Sandwell & West Birmingham Hospital NHS Trust
Sandwell PCT
Scottish Intercollegiate Guidelines Network (SIGN)
Scottish Nutrition & Diet Resources Initiative
Sedgefield PCT
Sefton PCT
Sexual Violence & Awareness Network
Sheffield Children's NHS Foundation Trust
Sheffield PCT
Sheffield Teaching Hospitals NHS Foundation Trust
Social Care Institute for Excellence (SCIE)
Social Interface
Social Perspectives Network
South Central Ambulance Service NHS Trust
South Essex Partnership NHS Foundation Trust
Southampton University Hospitals NHS Trust
St Andrew's Healthcare
Staffordshire Ambulance HQ
Staffordshire Moorlands PCT
Stockport PCT
Surrey PCT
Sussex Partnership NHS Trust
Tavistock and Portman Foundation Trust
The Afiya Trust
The Chartered Society of Physiotherapy
The David Lewis Centre
The Haemophilia Society
The Neurological Alliance
The Royal College of Psychiatrists
The Royal Society of Medicine
The Survivors Trust
Triangle Services for Children
United Lincolnshire Hospitals NHS Trust
University College London Hospitals (UCLH) Acute Trust
Welsh Ambulance Service Trust
Welsh Assembly Government

Welsh Scientific Advisory Committee (WSAC)
West London Mental Health NHS Trust
West Midlands Ambulance Service NHS Trust
Western Cheshire Primary Care Trust
Western Health and Social Care Trust
Wiltshire PCT
Wirral Hospital Acute Trust
York NHS Foundation Trust
Yorkshire and the Humber LSA

# Abbreviations

| | |
|---|---|
| A&E | Accident and Emergency department |
| ADHD | Attention defecit hyperactivity disorder |
| BMI | Body mass index |
| CBCL | Child behaviour checklist |
| CI | Confidence interval |
| CSA | Child sexual abuse |
| CT | Computed tomography |
| EL | Evidence level (level of evidence) |
| ENT | Ears, nose and throat |
| FII | Fabricated or induced illness |
| GDG | Guideline Development Group |
| GORD | Gastro-oesophageal reflux disease |
| GP | General practitioner |
| HTA | Health Technology Assessment |
| MRI | Magnetic resonnance imaging |
| MSBP | Munchausen syndrome by proxy |
| MVC | Motor vehicle crash |
| NAHI | Non-accidental head injury |
| NAPAC | National Association for People Abused in Childhood |
| NCC-WCH | National Collaborating Centre for Women's and Children's Health |
| NHS | National Health Service |
| NICE | National Institute for Health and Clinical Excellence |
| NSPCC | National Society for the Prevention of Cruelty to Children |
| PPIP | Patient and Public Involvement Programme |
| OR | Odds ratio |
| RR | Relative risk |
| SD | Standard deviation |
| SDH | Subdural haemorrhage |
| SIDS | Sudden infant death syndrome |
| SIGN | Scottish Intercollegiate Guidelines Network |
| STI | Sexually Transmitted Infection |
| TBI | Traumatic brain injury |

# Glossary of terms

| | |
|---|---|
| **Absolute risk reduction** | The difference between the observed rates of an event (i.e. the proportions of individuals with the outcome of interest) in the groups being compared |
| **Affect** | Emotion, feeling |
| **Apnoea** | A period when there is no external breathing |
| **Apparent life-threatening event** | A sudden event, characterised by a combination of apnoea, colour changed, marked change in muscle tone and choking or gagging |
| **Body mass index** | A person's weight (in kilograms) divided by the square of their height (in metres). It is used to determine whether a person is underweight, overweight or obese. |
| **Cognition** | Thinking, believing |
| **Craniocerebral** | Related to the skull and the brain |
| **Cyanosis** | An appearance of blueness in skin, mucous membranes due to a lack of oxygen or fall in arterial oxygen saturation |
| **Dental caries** | Tooth decay |
| **Dysuria** | Pain on passing urine |
| **Ecchymosis** | Type of bruise that looks bluish-black. Caused by the leaking of blood into tissues as a result of injury or blood disorder |
| **Erythema** | Redness of the skin |
| **Externalising** | Behaviours that represent interpersonal conflict such as aggression, oppositional and other antisocial behaviours |
| **Femoral** | Of the femur, the thigh bone |
| **Genital mycoplasmas** | A bacterial sexually transmitted infection |
| **Gingival** | Of the gums |
| **Hymenal laceration** | An acute injury to the hymen of any depth |
| **Hymenal notch** | A non-acute injury to the hymen that is partial in depth |
| **Hymenal transection** | A non-acute injury to the hymen that results in an apparent absence of hymenal tissue through the width of the hymen to its base |
| **Hypernatraemic** | Elevated level of sodium on biochemical blood test |
| **Hyperphagic** | Excessive eating |
| **Internalising** | Describes a number of internal stresses, such as anxiety and depression |
| **Labial frenum** | Small piece of tissue that connects the lips to the gums |

| | |
|---|---|
| **Metaphyseal** | Fracture to the portion of bone between the shaft (diaphysis) of a long bone and the epiphysis or growing point at either end of the bone |
| **Mucosal lacerations** | Cut to the mucosa which is the cellular lining of the alimentary canal from mouth to anus and male and femal genital areas |
| **Near-drowning** | Survival after suffocation caused by a (potentially fatal) submersion in water/fluid |
| **Neurological sequelae** | Consequences that manifest as neurological symptoms e.g impaired cosciousness, fits, nerve damage etc |
| **Normative** | Normal/usual |
| **Oedema** | Excessive accumulation of fluid in the body tissues |
| **Oppositional defiant disorder** | A psychiatric disorder DSM iV criteria where a child is excessively defiant and hostile towards figures of authority |
| **Osteogenesis imperfecta** | A congenital disorder in which the bones are unusually fragile and brittle |
| **Osteopenia of prematurity** | Brittle or weak bones in pre-term infants |
| **Petechiae** | Minute haemorhages into the skin giving an appearance of clusters of tiny red dots |
| **Posterior fourchette/fossa** | Anatomical area of female genitalia at the base of the vagina where the labia minora (thin folds of tissue on either side of vaginal openning) join. It lies between the vaginal opening and the anus |
| **Post traumatic stress disorder** | Anxiety disorder that arises after exposure to one or more extreme stressors |
| **Somatic** | Relates to the body (as distinguised from the mind) |
| **Subconjuctivital** | Anatomical part of the eye, below the conjunctiva which is a clear membrane (thin layer) that covers the white of the eye |
| **Supracondylar** | Portion of the bone, namely humerus above the condyle or articulicular lower portion of the bone (elbow) |
| **Trichomonas vaginalis** | A single cell anaerobic protozoa that causes trichomoniasis, which is a sexually transmitted infection |
| **Visceral injury** | Injury to the organs within the body cavities |

# 1 Introduction

## 1.1 When to suspect child maltreatment

In 2005 there were 25,900 children's names on the child protection registers in England, including unborn children. (These children are now subject of a child protection plan.) This translates into rates of 24 per 10,000 children younger than 18 for any type of abuse, ten per 10,000 for neglect, four for physical abuse, two for sexual abuse, five for emotional abuse and three for multiple types of abuse. There were 552,000 referrals concerning child maltreatment to social services departments in England during the year ending 31 March 2005. These figures represent those seen by social services as 'at risk' of maltreatment, and are likely to be an under-estimation of the true scale of the problems, with surveys of the general public suggesting that around 20% of people have suffered some form of maltreatment as a child. This underestimation is in part due to lack of recognition or reporting by professionals including health care professionals, of suspected child maltreatment.

It was anticipated that the guidance would support and update the implementation of relevant recommendations from the National Service Framework (NSF) for Children, Young People and Maternity Services.

There is compelling evidence, including that reported in the NSF, of the harmful short and long term effects of various forms of child maltreatment, affecting all aspects of the child's health, development and well-being which can last throughout adulthood. These effects can include anxiety, depression, substance misuse, and self-destructive behaviours. In adulthood, there may be difficulties in forming or sustaining close relationships, sustaining work and potentially affecting future parenting capacity. The NSF states that: 'The high cost of abuse and neglect both to individuals (and to society) underpins the duty on all agencies to be proactive in safeguarding children.' There is some evidence from a number of randomised control trials suggesting that interventions to prevent abuse or recurrence of abuse have some effect on the short- and long-term well-being of the child.

In this guidance, the definitions of various forms of child maltreatment set out in Working Together (HM Government 2006)[1] are used, based on the concept of significant harm as the threshold for protective intervention, which was introduced in the Children Act 1989.

In order for effective child protection to occur, all agencies must cooperate and do so at the earliest point possible. This guidance addresses the crucial contribution of healthcare professionals to this endeavour, by setting out the indicators which will alert healthcare professionals to the recognition of possible child maltreatment.

## 1.2 Aim of the guidance

At the outset, the remit of the guidance was discussed at length with the Department of Health. Following this, workshops were held with key stakeholders and NICE to discuss the purpose of the guidance, its remit and its main outcomes. Information gathered from these meetings formed the basis of the content of the scope outlined below. It was decided that we would provide guidance integrating published literature with consensus opinion. Formal Delphi consensus methods would be adopted for part of this process.

This guidance aims to provide a summary of clinical features associated with maltreatment that may be observed when a child presents to the NHS. When used in routine practice, the guidance should prompt healthcare professionals who are not specialists in child protection to think about the possibility of maltreatment. The guidance is not intended to be a definitive assessment tool nor does it define diagnostic criteria or tests. The guidance applies to all children up to 18 years of age.

## 1.3 Areas outside scope of the guidance

The following topics have not been covered within this guidance:

- risk factors for maltreatment, for example family factors
- independent clinical features of parental/carer behaviour not related to the child
- diagnostic assessment, investigation and tests, for example x-rays
- communication of suspicions to parents and/or the child
- education and information for parents, carers and children
- treatment and care of children if maltreatment is suspected
- healthcare professionals' competency, training and behaviour, including behavioural change and the type of healthcare professional who should think about maltreatment
- service organisation
- how healthcare professionals should proceed once they have come to suspect maltreatment
- child protection procedures
- protection of the unborn child
- children who have died as a result of child maltreatment. It should be noted that there are special procedures that should be followed when a child dies unexpectedly.[1]

## 1.4 For whom is the guidance intended?

This guidance is of relevance to those who work in or use the National Health Service (NHS) in England and Wales, in particular:

- GPs, primary care and child health teams
- professional groups who are routinely involved in the care of children and families
- professionals who may encounter children in the course of their professional duties, for example radiographers, adult mental health professionals
- those responsible for commissioning and planning healthcare services, including primary care trust commissioners, Health Commission Wales commissioners, and public health and trust managers

In addition, this guidance may be of interest to professionals working in social services and education/childcare settings.

## 1.5 Who has developed the guidance?

The guidance was developed by a multi-professional and lay working group (the Guideline Development Group or GDG) convened by the National Collaborating Centre for Women's and Children's Health (NCC-WCH). Membership included:

- one child and adolescent psychiatrist
- two general practitioners
- two nurses/health visitors
- one child psychologist
- one accident and emergency consultant
- one consultant community paediatrician
- three consultant hospital paediatricians
- one social worker

- four lay representatives

All committee members were recruited because of their expertise in child protection.

Staff from the NCC-WCH provided methodological support for the guidance development process, undertook systematic searches, retrieved and appraised the evidence and wrote successive drafts of the guidance. A clinical adviser with expertise in child protection and the related evidence base was recruited to support the technical team.

All GDG members' interests were recorded on declaration forms provided by NICE. The form covered consultancies, fee-paid work, shareholdings, fellowships and support from the healthcare industry. GDG members' interests are listed in Appendix A.

## 1.6 Other relevant documents

This guidance is intended to complement other existing and proposed works of relevance, including related NICE guidance:

- 'Eating disorders: Core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders' guideline (NICE clinical guideline 9), available from www.nice.org.uk/Guidance/CG9
- 'Self-harm: The short-term physical and psychological management and secondary prevention of self-harm in primary and secondary care' guideline (NICE clinical guideline 16), available from www.nice.org.uk/Guidance/CG16
- 'Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care' NICE clinical guideline (publication expected March 2010), details available from www.nice.org.uk
- 'Nocturnal enuresis in children (bedwetting): The management of bed-wetting in children' NICE clinical guideline (publication expected August 2010), details available from www.nice.org.uk
- 'What to do if you're worried a child is being abused', available from www.dh.gov.uk
- Working Together to Safeguard Children 2006, available from www.everychildmatters.gov.uk/socialcare/safeguarding/workingtogether
- Safeguarding Children in Whom Illness is Fabricated or Induced 2008, available from www.everychildmatters.gov.uk/socialcare/safeguarding

## 1.7 Guideline Development Methodology

This guidance was commissioned by NICE and developed in accordance with the guideline development process outlined in the NICE Guidelines Manual.[2] The general approach is outlined below. Where deviations to this approach occurred, this is addressed in the relevant section.

### Forming clinical questions

The GDG identified a list of features that were thought to be signs or symptoms of maltreatment. The list was refined based on relevance to the healthcare setting (see Appendix B). The standard clinical question was 'when is feature X a reason to suspect child maltreatment?' It should be noted that clinical features that do not appear in this guidance may be indicators of maltreatment nonetheless.

### Literature search strategy

Initial scoping searches were executed to identify relevant guidelines (local, national and international) produced by other development groups. The Physical Signs of Child Sexual Abuse (RCPCH)[3], Accuracy of screening procedures for non-accidental injury in children: systematic review and modelling of clinical effectiveness (HTA)[4] and systematic reviews by the Welsh Child Protection Systematic Review Group were referred to, with permission.

Relevant published evidence to inform the guideline development process and answer the clinical questions was identified by systematic search strategies, unless recent high-quality systematic reviews had been identified. Additionally, stakeholder organisations were invited to submit evidence for

consideration by the GDG provided it was relevant to the clinical questions and of equivalent or better quality than evidence identified by the search strategies.

Systematic searches to answer the clinical questions formulated and agreed by the GDG were executed using the following databases via the OVID platform: Medline (1950 onwards), Embase (1980 onwards), Cumulative Index to Nursing and Allied Health Literature (1982 onwards), PsycINFO (1967 onwards), Cochrane Central Register of Controlled Trials (3rd Quarter 2007), Cochrane Database of Systematic Review (3rd Quarter 2007), and Database of Abstracts of Reviews of Effects (3rd Quarter 2007).

Search strategies combined relevant controlled vocabulary and natural language in an effort to balance sensitivity and specificity. Unless advised by the GDG, searches were not date-specific. Language restrictions were applied to searches and searches were limited to English language results. Both generic and specially developed methodological search filters were used appropriately.

There was no systematic attempt to search grey literature (conferences, abstracts, theses and unpublished trials). Hand searching of journals not indexed on the databases was not undertaken.

At the end of the guideline development process searches were updated and re-executed, thereby including evidence published and included in the databases up to 5 September 2008. Any literature published after this date was not included. This date should be considered the starting point for searching for new literature for future updates to this guidance.

Further details of the search strategies, including the methodological filters employed, are provided on the accompanying CD-ROM and on the NICE website.

### Synthesis of clinical evidence

Clinical evidence was reviewed using established guides[5-8] and classified using the established hierarchical system shown in Table 1.1.[8] This system reflects the susceptibility to bias that is inherent in particular study designs.

The type of clinical question dictates the highest level of evidence that may be sought. In assessing the quality of the evidence, each study receives a quality rating coded as '++', '+' or '-'. For issues of therapy or treatment, the highest possible evidence level (EL) is a well-conducted systematic review or meta-analysis of randomised controlled trials (RCTs; EL=1++) or an individual RCT (EL=1+). As therapeutic interventions were not part of the scope, no randomised controlled trials were reviewed. Studies of poor quality are rated as '-'. Usually, studies rated as '-' should not be used as a basis for making a recommendation, but they can be used to inform recommendations.

Table 1.1 Levels of evidence for intervention studies[8]

| Level | Source of evidence |
|---|---|
| 1++ | High-quality meta-analyses, systematic reviews of randomised controlled trials (RCTs), or RCTs with a very low risk of bias |
| 1+ | Well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias |
| 1- | Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias |
| 2++ | High-quality systematic reviews of case-control or cohort studies<br>High-quality case-control or cohort studies with a very low risk of confounding, bias or chance and a high probability that the relationship is causal |
| 2+ | Well-conducted case-control or cohort studies with a low risk of confounding , bias or chance and a moderate probability that the relationship is causal |
| 2- | Case-control or cohort studies with a high risk of confounding, bias or chance and a significant risk that the relationship is not causal |
| 3 | Non-analytical studies (for example, case reports, case series) |
| 4 | Expert opinion, formal consensus |

For each clinical question, the highest available level of evidence was selected. Where appropriate, for example, if a systematic review or meta-analysis existed in relation to a question, studies of a weaker design were not included. Where systematic reviews or meta-analyses did not exist, comparative studies and large case series (comprising data on more than 50 children) were sought.

Evidence was synthesised qualitatively by summarising the content of identified papers in evidence tables and agreeing brief statements that accurately reflected the evidence.

Summary results and data are presented in the text. More detailed results and data are presented in the evidence tables provided on the accompanying CD-ROM and on the NICE website. Where possible, dichotomous outcomes are presented as relative risks (RRs) with 95% confidence intervals (CIs), and continuous outcomes are presented as mean differences with 95% CIs or standard deviations (SDs).

### Delphi consensus

A two round modified Delphi consensus process was used to derive recommendations in some areas (see Appendix C). These areas were defined by

- there being a lack of relevant literature on a clinical feature's importance in child maltreatment,
- the GDG being unable to reach a congruent opinion

or

- the GDG requiring external validation from a wider group of experts (the Delphi panel) for their opinion.

There were some areas where the evidence base was sparse but the GDG was able to reach internal consensus.

The Delphi panel comprised child protection experts (clinicians with significant experience in child protection). There were 95 respondents to round 1 of the survey and their affiliations are listed below. Please see Appendix C for information on recruitment processes.

- 30 Paediatricians (including 13 named/designated doctors for child protection/safeguarding children)
- 15 Nurses (including 14 named/designated nurse for child protection/safeguarding children)
- 3 GPs (1 child protection adviser for GPs)
- 1 Genito-urinary medicine physician
- 7 Health visitors
- 4 Dentists (including 1 named dentist for safeguarding children board)
- 3 Psychotherapists
- 3 Forensic physicians
- 11 Psychiatrists
- 13 Psychologists (including 2 clinical leads for CAMHS)
- 1 Gastroenterologist
- 1 Social services
- 2 Academics
- 1 Other

Participants were asked to rate their level of agreement with and comment on a series of statements via an online survey. Agreement was measured using a Likert-like scale taking values between 1 and 9 where 1 represented "strongly disagree" and 9 represented "strongly agree". Consensus was said to have been reached if more than 75% of respondents answered 7, 8 or 9. Statements which did not meet the threshold for agreement in the first round were either excluded or modified according to the comments and sent out for a second round. After the second round, the GDG reviewed the responses using the same threshold for agreement. The GDG accepted statements that met the threshold. The GDG was allowed to amend statements in the light of the Delphi panel's comments after the second validation phase.

### Forming recommendations

For each clinical question, recommendations were derived using, and explicitly linked to, the evidence that supported them. In the first instance, informal consensus methods were used by the GDG to agree evidence statements and recommendations. Additionally, in some areas formal consensus methods were used to identify current best practice as described above. A number of recommendations that underpin the suspicion of child maltreatment were formed through GDG consensus (see Chapter 3). These are based on principles of good clinical practice and form the basis upon which the clinical features section of the guidance rests. Shortly before the consultation period, the GDG members independently assessed all recommendations and group consensus was sought. The agreed draft recommendations were sent to two peer reviewers for comment.

The GDG also identified some areas where information that corresponded to the remit of this guidance was lacking and formulated recommendations for future research. From these recommendations, four key priorities for research were identified based on clinical need.

#### External review

This guidance has been developed in accordance with the NICE guideline development process. This has included giving registered stakeholder organisations the opportunity to comment on the scope of the guidance at the initial stage of development and on the evidence and recommendations at the concluding stage. The developers have carefully considered all of the comments during the consultation by registered stakeholders and validation by NICE.

#### Health Economics

Ordinarily NICE clinical guidelines have economic input in order to inform the GDG of potential economic issues and to help ensure that recommendations represent a cost-effective use of scarce NHS resources.

However, for this guidance, it was decided that such an approach is not appropriate. Economic evaluation involves a comparison of two or more alternatives in terms of their costs and benefits. As such, it is a tool to aid decision making in selecting between these different alternatives. This guidance does not explicitly address clinical decision making between different courses of action on economic grounds but rather seeks to promote awareness of features that could indicate child maltreatment. Therefore, without any economic decision making component to recommendations it was felt that health economics was not relevant to this guidance.

## 1.8 Schedule for updating the guidance

Clinical guidelines commissioned by NICE are published with a review date 4 years from date of publication. Reviewing may begin earlier than 4 years if significant evidence that affects guideline recommendations is identified sooner. The updated guidance will be available within 2 years of the start of the review process.

# 2 Summary of recommendations and care pathway

## 2.1 Summary of recommendations

### Chapter 3 Points for clinical practice and definitions

*Points for clinical practice*

For the purposes of this guidance, to **suspect** maltreatment means serious concern about the possibility of child maltreatment but is not proof of it; healthcare professionals should:

- record exactly what they see and hear
- record the nature of the professional's concern
- follow local procedures on what to do when they think a child is being abused or neglected.

This may trigger a child protection investigation, supportive services may be offered to the family following an assessment, or alternative medical explanations may be identified.

For the purposes of this guidance, to **consider** maltreatment means that maltreatment is a possible explanation for a report/clinical feature or is included in the differential diagnosis. In considering the possibility of child maltreatment, the healthcare professional should:

- record exactly what they see and hear
- record the nature of their concern
- look for indicators of maltreatment in the history, parent-child interaction or the child's presentation now or in the past. This may lead the healthcare professional to suspect child maltreatment.

No further action is **not** an option if maltreatment is considered.

Take one or more of the following courses of action, record the action(s) taken and the outcome:

- discuss the case with a senior colleague and/or a named or designated professional for safeguarding children
- gather collateral information from other disciplines within health and other agencies
- review the child at a later date, looking out for repeated presentations of this or any other indicator.

Healthcare professionals should seek an explanation for any injury that presents to them. Healthcare professionals should suspect child maltreatment when there is no explanation for a serious injury or the explanation proffered for any injury or presentation is implausible, inadequate or inconsistent with the child's presentation or medical condition. For example:

- discrepancies between the explanation and the child's age or developmental stage
- would not be expected to have occurred during this child's normal activities
- inconsistency in explanations between those given by the parent/carer and that given by child (unless the child is not at a developmental stage to give an account or it is considered inappropriate or not possible to obtain an account)
- inconsistency in explanations between those given by the child's parents or carers.

While not all disclosures may be accurate accounts of maltreatment, healthcare professionals should suspect maltreatment if they receive a disclosure from a child. The professional should explain to the child the need to discuss this with another appropriate professional and the fact that they cannot keep this confidential.

Healthcare professionals should call appropriately on other disciplines and agencies in the process of substantiating or not substantiating child maltreatment.

Healthcare professionals should be aware that some child maltreatment may be explained as, or mistaken for, cultural practice; a small number of cultural practices are harmful to children.

Healthcare professionals should act appropriately when considering or suspecting maltreatment even when they have an understanding of the background and reasons why the maltreatment might have occurred and even when there was no intention to harm the child.

Healthcare professionals should be aware that maltreatment in children with disabilities may be more difficult to recognise.

Healthcare professionals should be aware of deterrents to recognising possible child maltreatment, including fear of external challenges, risk of losing parents' confidence, resource implications and uncertainty about their suspicions.

Healthcare professionals should acknowledge that considering or suspecting maltreatment can be stressful and, when appropriate, should seek support from peers, senior colleagues and designated or named professionals.

*Definitions of maltreatment*

Healthcare professionals should use the definitions of child maltreatment within 'Working Together to Safeguard Children' (2006) and its supplementary guidance. These include:

- exposure to domestic abuse
- prostitution
- exploitation or corruption of children and young people, including trafficking.

## Chapter 4 Physical Features

*Bruises*

Healthcare professionals should suspect child maltreatment when a child has bruising in the shape of an implement, for example hand, ligature, stick or teeth, or a grip mark.

Healthcare professionals should suspect child maltreatment when there is bruising or petechiae (tiny red or purple spots) in the absence of a causative coagulation disorder or other relevant medical condition where the explanation for the bruising is implausible, inadequate, inconsistent or discrepant with the pattern of the bruising or the developmental stage of the child. Presentations include:

- bruising in babies and children who are not independently mobile
- multiple bruises or bruises in clusters
- bruises of uniform appearance
- bruises other than on bony prominences, for example bruises on face and neck.

*Bites*

Healthcare professionals should suspect child maltreatment when there is a report or appearance of a human bite mark, on a child, suspected to be caused by an adult.

Healthcare professionals should consider neglect when there is a report or appearance of an animal bite in a child who has been inadequately supervised.

*Cuts and abrasions*

Healthcare professionals should suspect child maltreatment when a child has cuts, abrasions or scars that are in the shape of an implement or linear injuries around the neck, wrists or ankles suggesting ligatures or attempted strangulation.

Healthcare professionals should suspect child maltreatment when a child has cuts, abrasions or scars when the explanation is implausible, inadequate, inconsistent or discrepant with the pattern of injury or the developmental stage of the child. Presentations include:

- cuts and abrasions in babies and children who are not independently mobile
- multiple injuries of uniform appearance
- an injury to the genital area
- injuries with a symmetrical distribution
- there are injuries to areas usually protected by clothing (including back, chest, abdomen, axilla)
- injuries to the mouth, eyes, ears, neck and sides of face
- a pattern of previous or repeated injuries, for example multiple scars.

*Thermal injuries*

Healthcare professionals should suspect child maltreatment in a child with burn or scald injuries:

- when the explanation is absent, implausible, inadequate, inconsistent or discrepant with the pattern of thermal injury or the developmental stage of the child
- in babies, or children who are not independently mobile
- scalds that are indicative of forced immersion, for example,
  - scalds to buttocks, perineum and lower limbs
  - scalds to limbs in a glove and/or stocking distribution
  - scalds to limbs with symmetrical distribution
  - scalds with sharply delineated borders
- contact burn/scald injuries on the backs of hands and soles of feet, buttocks, back and soft tissue areas that would not be expected to come into contact with a hot object in an accident, or
- contact burns in the shape of the implement used for example, cigarettes, irons.

*Cold injury*

Healthcare professionals should consider child maltreatment when a child has swollen, red hands and feet without obvious medical cause or when a child presents with hypothermia with no adequate explanation.

*Hair loss*

Healthcare professionals should consider child maltreatment when a child has hair loss due to inflicted hair-pulling.

*Fractures*

Healthcare professionals should consider child maltreatment when a child has a fracture in the absence of overt traumatic cause or known medical condition that predisposes to fragile bones (e.g. osteogenesis imperfecta, osteopenia of prematurity), particularly in children under 18 months.

Healthcare professionals should suspect child maltreatment when a child has a fracture and the explanation is absent, implausible, inadequate, inconsistent or discrepant with the pattern of fracture or the developmental stage of the child. Patterns include:

- multiple fractures
- multiple fractures of different ages
- x-ray evidence of occult fractures (fractures identified on x-rays that were not clinically evident), for example rib fractures in infants and toddlers.

*Intra-cranial injuries*

Healthcare professionals should suspect child maltreatment in any child with any clinical feature of intra-cranial injury in the absence of confirmed major accidental trauma or known medical cause:

- when there is an absent, implausible, inadequate or inconsistent explanation
- in an infant or toddler
- when there are intra-cranial injuries in association with:
  - retinal haemorrhages
  - rib and/or long bone fractures
  - other associated inflicted injuries
- when there are multiple extra axial bleeds including subdural haemorrhage and subarachnoid haemorrhage, with or without hypoxic ischaemic damage to the brain.

*Eye-trauma*

Healthcare professionals should suspect child maltreatment when a child has retinal haemorrhages in the absence of major accidental trauma or a recognised medical cause including birth-related causes.

Healthcare professionals should suspect child maltreatment when a child has an injury to the eye and/or eyelids when the explanation is absent, implausible, inadequate, discrepant with the pattern of the injury or the developmental stage of the child or inconsistent.

*Spinal injuries*

Healthcare professionals should suspect physical abuse when a child presents with signs of a spinal injury (injury to vertebrae or within the spinal canal) in the absence of witnessed significant trauma. This may also present as:

- a finding on skeletal survey or magnetic resonance imaging
- cervical injury in association with inflicted head injury
- thoracolumbar injury in association with focal neurology or unexplained kyphosis.

*Visceral injuries*

Healthcare professionals should suspect child maltreatment when a child has an intra-abdominal or intra-thoracic injury in the absence of an explanation of major accidental trauma or where the history is not consistent with the injury and in one or more of the following circumstances:

- delay in presentation
- absent, implausible, inadequate or inconsistent explanation
- may be in association with other injuries or in isolation, for example there is no external bruising or other injury.

*Oral injury*

Healthcare professionals should consider child maltreatment when a child has sustained an injury to the teeth, gums, tongue, frena or oral cavity where the explanation is absent, implausible, inadequate or inconsistent with the developmental level of the child.

*Genital and anal symptoms/genital and anal signs*

Healthcare professionals should consider sexual abuse when a girl or boy has discomfort on passing urine (dysuria) or ano-genital discomfort that is persistent or recurrent and is not explained by conditions such as worms, urinary infection, skin conditions, poor hygiene or known allergies.

Healthcare professionals should consider sexual abuse when a girl or boy has a genital or anal symptom such as genital or anal bleeding or genital or anal discharge without a medical explanation.

Healthcare professionals should suspect sexual abuse when a girl or boy has a genital or anal symptom such as genital or anal bleeding or genital or anal discharge without a medical explanation if these complaints are persistent or repeated, are associated with behavioural or emotional change and/or with other information that suggests the possibility of sexual abuse.

Healthcare professionals should suspect child sexual abuse when a girl or boy has a genital injury with an absent, implausible, inadequate or inconsistent explanation for the injury.

Healthcare professionals should suspect sexual abuse when a girl or boy has an anal fissure when constipation, Crohn's disease and passing hard stools have been excluded.

Healthcare professionals should suspect sexual abuse when a girl or boy has an anal or perianal injury (as evidenced by bruising, laceration, swelling, abrasion) with an absent, implausible, inadequate or inconsistent explanation for the injury.

Healthcare professionals should suspect sexual abuse when a girl or boy has a gaping or dilated anus in the absence of medical causes such as neurological disorders or very severe constipation.

Healthcare professionals should consider child sexual abuse if there is evidence of foreign bodies in the vagina or anus, noting that foreign bodies may be indicated by offensive vaginal discharge in girls.

*Sexually transmitted infections*

Healthcare professionals should suspect sexual abuse in a child below the age of 13 years who presents with any sexually transmitted infection (such as neisseria gonorrheae, chlamydia trachomatis, syphilis, anogenital warts, genital herpes simplex, hepatitis B and C, HIV and trichomonas vaginalis) unless there is clear evidence of mother-to-child transmission during birth or blood contamination.

Healthcare professionals should consider sexual abuse when a young person aged 13 to 15 years presents with any sexually transmitted infection (such as neisseria gonorrheae, chlamydia trachomatis, syphilis, anogenital warts, genital herpes simplex, hepatitis B and C, HIV and trichomonas vaginalis) unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer.

Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years of age presents with any sexually transmitted infection (such as neisseria gonorrheae, chlamydia trachomatis, syphilis, anogenital warts, genital herpes simplex, hepatitis B and C, HIV and trichomonas vaginalis) when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity and one or more of the following is present:

- a clear discrepancy in power or mental capacity between the young person and their sexual partner, in particular where the relationship constitutes incest or is with those persons in positions of trust, for example teacher, sports coach, minister of religion
- concern that the young person is being exploited or the sexual activity appears not to be consensual.

*Pregnancy*

Healthcare professionals must recognise that sexual intercourse in a child aged under 13 years is unlawful and therefore pregnancy constitutes maltreatment.

Healthcare professionals should consider sexual abuse when a young person aged 13 to 15 years is pregnant.

Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years of age, is pregnant and one or more of the following is present:

- a clear discrepancy in power or mental capacity between the young woman and the putative father, in particular where the relationship constitutes incest or is with persons in positions of trust, for example teacher, sports coach, minister of religion, or
- concern that the young person is being exploited or that the sexual activity appears not to have been consensual.

## Chapter 5 Neglect – failure of provision and failure of supervision

*General features of neglect*

Healthcare professionals should consider neglect if a child's state of clothing or footwear is consistently inappropriate, for example, for the weather or the child's size.

Healthcare professionals should suspect neglect if a child is persistently smelly and dirty.

Healthcare professionals should suspect neglect if a child has persistent infestations, such as scabies or head lice, where no attempt has been made to treat them.

Healthcare professionals should consider neglect if a child displays faltering growth (failure to thrive) due to lack of provision of an adequate or appropriate diet.

Healthcare professionals should consider neglect if parents persistently fail to engage with current preventive child health promotion programmes, for example health and development reviews, screening and considering advice about immunisation, feeding, diet, exercise and injury prevention.

Healthcare professionals should suspect neglect if parents or carers fail to promptly seek medical advice for their child to the extent that the child's health and well-being is compromised or the child is in ongoing pain.

Healthcare professionals should consider neglect if parents or carers fail to administer essential prescribed medication for their child.

Healthcare professionals should consider neglect if parents or carers persistently fail to obtain treatment for their child's dental caries.

Healthcare professionals should consider neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being.

Healthcare professionals should consider neglect when the explanation for the injury, including a burn, suggests lack of appropriate supervision.

Healthcare professionals should consider neglect if a child is not being cared for by a person who is able to provide safe or adequate care, including ensuring regular school attendance at compulsory school age.

Healthcare professionals should be aware that abandonment constitutes neglect.

Healthcare professionals should suspect neglect if they encounter the following persistent home conditions: poor standard of hygiene such that a child's health may be affected, inadequate provision of food, living space that is inappropriate or unsafe for the child's developmental stage.

*Over- and under-nutrition*

Healthcare professionals should consider child maltreatment in any child with abnormal growth patterns for which there is no medical cause.

## Chapter 6 Clinical presentations

*Repeated attendance at medical services*

Healthcare professionals should consider child maltreatment when they become aware of:

- an unusual pattern of presentation to, and contact with, healthcare providers, or
- frequent presentations or reports of injuries.

*Strangulation and suffocation*

Healthcare professionals should suspect child maltreatment if a child shows signs of strangulation, for example bruising around the neck or ligature marks with or without facial petechiae, in the absence of a plausible, adequate or consistent explanation.

*Apparent life threatening event*

Healthcare professionals should suspect child maltreatment with repeated presentations of an apparent life-threatening event where the onset is witnessed only by the carer and where underlying medical causes have not been identified.

Healthcare professionals should consider child maltreatment if an infant has an apparent life-threatening event with bleeding from the nose or mouth where underlying medical causes have not been identified.

*Poisoning*

Healthcare professionals should suspect child maltreatment, either neglect or inflicted harm, in cases of poisoning in children when:

- there is a report of inappropriate administration of substances, including prescribed and non-prescribed drugs
- there are unexpected blood levels of non-prescribed medication
- there is reported or biochemical evidence of ingestions of more than one toxic substance
- there is any case of poisoning in babies or children who would be unable to access the substance independently
- a child presents with poisoning and there is an absent, implausible, inadequate or inconsistent explanation for the poisoning or how the substance came to be in the child
- there have been repeated presentations of ingestions in the index child or other children in the household.

Healthcare professionals should consider child maltreatment in cases of hypernatraemic dehydration, which may arise from, for example, over-concentrated preparations of formula feeds as well as from deliberate salt poisoning.

*Near drowning*

Healthcare professionals should suspect child maltreatment when a near-drowning incident has an absent, implausible, inadequate or inconsistent explanation or when the child's presentation is inconsistent with the account. Child maltreatment should also be considered when the incident suggests a lack of supervision (see general features of neglect).

*Fabricated or induced illness*

Healthcare professionals should consider fabricated or induced illness if a child's history, physical or psychological presentations and/or findings of assessments, examinations or investigations yield a puzzling discrepancy to a recognised clinical picture. This still applies even if the child has a previous or concurrent established physical or psychological illness or disorder.

Healthcare professionals should suspect fabricated or induced illness if, in addition to the above, one or more of the following is present:

- reported symptoms and signs are not seen to begin if the carer is absent
- reported symptoms are only observed by the carer
- there is an inexplicably poor response to prescribed medication and other treatment
- new symptoms are reported on resolution of previous ones
- history of events which are biologically implausible (e.g. small infants with a history of very large blood losses who do not become unwell or anaemic)
- over time the child is repeatedly presented with a range of signs and symptoms; and multiple opinions are sought inappropriately and persistently in both primary and secondary care
- the child's normal, daily life activities are being compromised beyond that which might be expected for any medical disorder from which the child is known to suffer, for example school attendance, use of aids to daily living such as wheelchairs
- the parent insists on a medical condition being investigated, recognised and treated in their child despite contrary clinical assessment and which healthcare professionals find difficult to challenge.

*Inappropriate or unexplained poor school attendance*

Healthcare professionals should consider child maltreatment if they become aware of poor school attendance that has no justification on health, including mental health, grounds.

## Chapter 7 Emotional, behavioural and interpersonal/social functioning

*Emotional and behavioural states*

Healthcare professionals should consider child maltreatment if a child or young person displays or is reported to display a marked change in behaviour or emotional state that constitutes a departure from the normal developmental trajectory for this child and is not explained by a known psychosocial stressor or medical cause.

For example:

- recurrent nightmares containing similar themes
- extreme distress
- markedly oppositional behaviour
- withdrawn.

Healthcare professionals should consider child maltreatment if a child's behaviour or emotional state is not consistent with the child's age and developmental stage or the child's emotional state or behaviour cannot be explained by medical causes, neurodevelopmental disorders (e.g. ADHD, autism spectrum disorders) or other psychosocial stressors (e.g. bereavement or parental separation) See lists below for examples.

| Emotional state | Behaviour | Interpersonal behaviours |
|---|---|---|
| Fearful | Aggressive | Indiscriminate contact/affection seeking or over-friendliness to strangers including healthcare professionals |
| Withdrawn | Oppositional | Excessive clinginess |
| Low self-esteem | | Persistently resorting to gaining attention |
| | | Child fails to seek or accept appropriate comfort or affection from an appropriate person when significantly distressed |
| | | Socially isolated |

Healthcare professionals should consider child maltreatment if a child shows repeated, extreme or sustained emotional responses out of proportion to a situation that are not expected for the child's developmental age or where a medical cause or neurodevelopmental disorder (for example ADHD, autism spectrum disorders and bipolar disorder) has been explored. These include:

- anger or frustration expressed as, for example, temper tantrum in a school-aged child or frequently flying into a rage at the least provocation
- distress expressed as, for example, inconsolable crying.

Healthcare professionals should consider child maltreatment if a child or young person regularly and persistently shows or is reported to assume age-inappropriate responsibilities which interfere with normal developmental tasks such as attending school. For example:

- a child may adopt a care-taking role for parents or siblings
- a very young child may show excessive comforting behaviours when witnessing parental distress
- children may demonstrate excessively "good" behaviour to prevent parental disapproval.

Healthcare professionals should consider child maltreatment if a child responds to a health examination/assessment in an unusual, unexpected and developmentally inappropriate way, for example extreme passivity, resistance or refusal.

*Self harm*

Healthcare professionals should consider past or current maltreatment, particularly sexual, physical or emotional abuse, as a reason for deliberate self-harm in a child or young person, including cutting, scratching, picking, biting or tearing skin to cause injury, taking prescribed or non-prescribed medications at higher than therapeutic doses when the intention is self-harm, pulling out hair or eyelashes.

*Abdominal pain*

Healthcare professionals should consider child maltreatment when a child has recurrent abdominal pain in the absence of a medical cause or other stressor unrelated to maltreatment, for example illness in the family, parental separation etc.

*Disturbances in eating and feeding behaviour*

Healthcare professionals should suspect child maltreatment in children who scavenge, steal, hoard or hide food in the absence of medical causes.

*Selective mutism (elective mutism)*

Healthcare professionals should consider child maltreatment when a child presents with selective mutism.

*Body rocking*

Healthcare professionals should consider emotional neglect if a child displays habitual body rocking in the absence of medical causes or neuro-developmental disorders.

*Wetting and soiling*

Healthcare professionals should consider child maltreatment in a child who has secondary day or night time wetting in the absence of medical causes (for example urinary tract infections), clearly identified psychosocial stressors (for example a death in the family, parental separation) which persists despite compliance with adequate management.

Healthcare professionals should consider child maltreatment in a child who is reported to be deliberately wetting.

Healthcare professionals should consider child maltreatment when there is a persistent punitive parental response to wetting against professional advice that the symptom is involuntary.

Healthcare professionals should consider child maltreatment in children showing encopresis (persistently defecating a normal stool in an inappropriate place) or persistent, deliberate smearing.

*Sexualised behaviour*

Healthcare professionals should suspect child maltreatment, particularly sexual abuse, when a pre-pubertal child displays or is reported to display repeated, coercive or persistent sexualised behaviours or preoccupation, such as sexual talk associated with knowledge, drawing genitalia, masturbation, emulating sexual activity.

Healthcare professionals should suspect a history of past or present maltreatment when a child or young person's sexual behaviour is indiscriminate, precocious or coercive.

Healthcare professionals should suspect sexual abuse when a pre-pubertal child displays or is reported to display unusual sexualised behaviours, including but not restricted to:

- oral-genital contact with another child or a doll
- requesting to be touched in the genital area
- inserting or attempting to insert an object, finger or penis into another child's vagina or anus.

*Runaway behaviour*

Healthcare professionals should consider child maltreatment if a child or young person has run away from home or care, or is living in alternative accommodation without the full agreement of the parent/s or carer/s.

*Dissociation*

Healthcare professionals should consider child maltreatment if a child shows dissociation (transient episodes of detachment from current interaction that are outside the child's voluntary control that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction) that is not explained by a known traumatic event unrelated to maltreatment.

***Chapter 8 Parent-child interactions***

Healthcare professionals should consider emotional abuse when there is concern that parent-child interactions may be harmful. These include:

- negativity, hostility towards, rejection of and/or scapegoating of a child
- developmentally inappropriate expectations of or interactions with a child including inappropriate threats or methods of disciplining
- exposure to frightening and/or traumatic experiences including domestic abuse
- using the child for the fulfilment of the parent's needs, for example, children being used in marital disputes
- failure to promote the child's appropriate socialisation, for example by involving children in unlawful activities, by isolation and by not providing stimulation or education.

If any of these interactions are **persistent**, this is emotional abuse.

Healthcare professionals should consider emotional neglect when there is emotional unavailability and unresponsiveness from the parent/carer towards the child. This includes the family which is high on criticism and low on warmth. If this is persistent, this is emotional abuse.

## 2.2 Key priorities for research

**Fractures**

How can abusive fractures, those resulting from conditions that lead to bone fragility and those resulting from accidents be distinguished, particularly in relation to metaphyseal fractures?

*Why this is important*

A prospective comparative study of fractures in physical abuse, conditions leading to bone fragility and those resulting from accidental trauma to encompass a study of metaphyseal fractures specifically is needed because the existing evidence base does not fully account for differential diagnosis of fractures in the infant and toddler age group.

**Ano-genital symptoms, signs and infections**

What are the ano-genital signs, symptoms and presenting features (including emotional and behavioural features) that distinguish sexually abused from non-abused children?

*Why this is important*

A well-conducted prospective study is needed in this area to address problems of reporting bias in the existent literature, particularly in relation to non-abused children.

**Fabricated or induced illness**

Are the indicators of fabricated or induced illness as described in the recommendations valid for discriminating FII from other explanations?

*Why this is important*

Although the alerting signs have been developed based on clinical experience and are considered clinically useful in detecting FII, there is a need to establish their discriminant validity. This could be achieved by a prospective study.

**Emotional and Behavioural States**

What aspects of behaviours and emotional states as alerting individual signs discriminate maltreated children from non-maltreated children in the healthcare setting?

*Why this is important*

Much of the research in this area uses composite scores from instruments or scenarios to discriminate maltreated from non-maltreated children. To translate these scores into items that are usable for healthcare professionals who are meeting children for the first time, it is necessary to know whether particular behavioural and emotional states can be used to identify maltreated children. A prospective comparative study in the healthcare setting is required.

## 2.3 Summary of research recommendations

**Chapter 4 Physical Features**

*Fractures*
How can abusive fractures, those resulting from conditions that lead to bone fragility and those resulting from accidents be distinguished, particularly in relation to metaphyseal fractures?

*Ano-genital symptoms, signs and infections*
What are the ano-genital signs, symptoms and presenting features (including emotional and behavioural features) that distinguish sexually abused from non-abused children?

**Chapter 6 Clinical Presentations**

*Fabricated or induced illness*

Are the indicators of fabricated or induced illness as described in the recommendations valid for discriminating FII from other explanations?

**Chapter 7 Emotional, behavioural and interpersonal/social functioning**

*Emotional and Behavioural States*

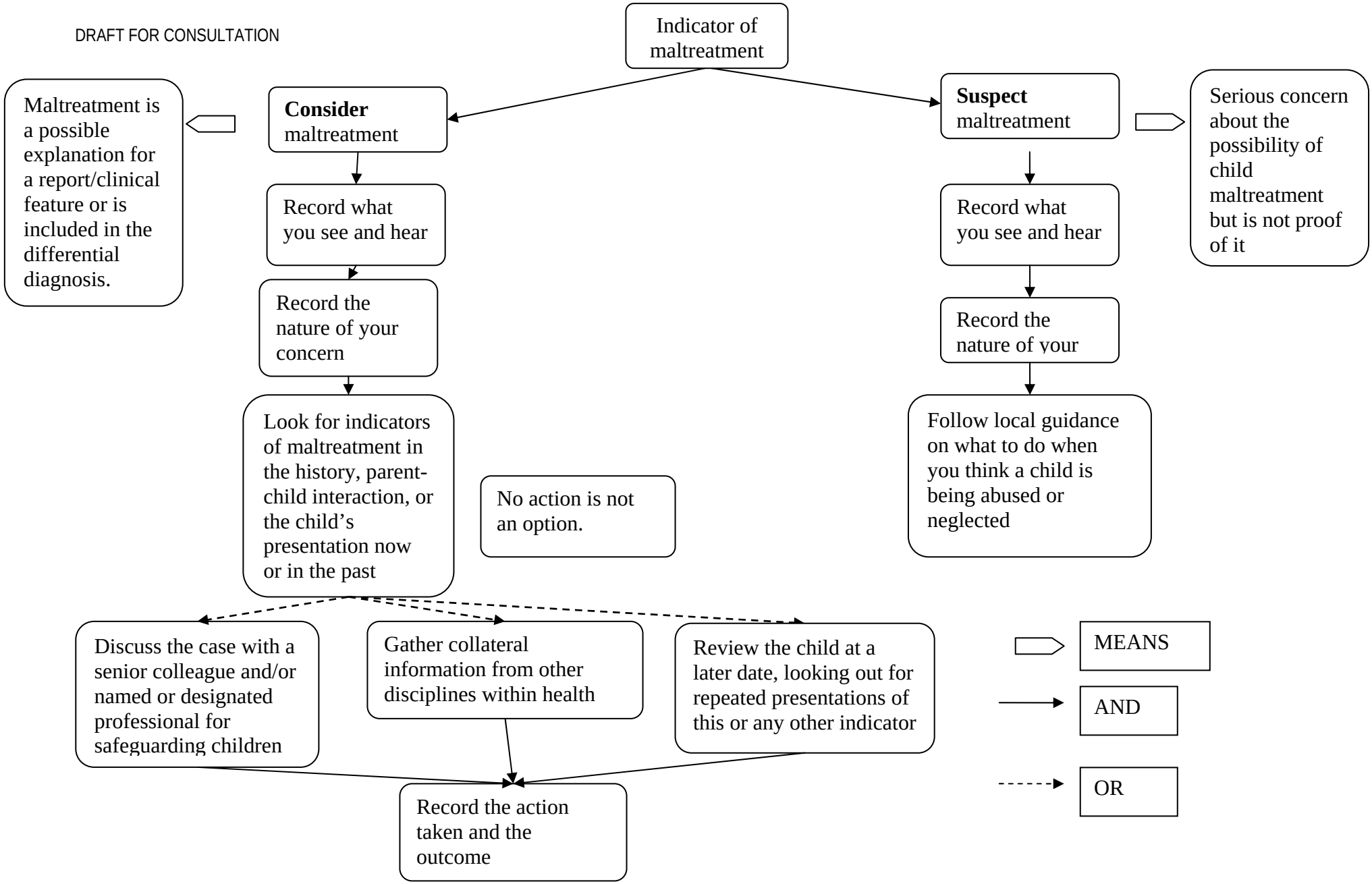
What aspects of behaviours and emotional states as alerting individual signs discriminate maltreated children from non-maltreated children in the healthcare setting?

*Self harm*

Further research is needed on the link between emotional abuse and neglect, including emotional neglect, and deliberate self-harm.

## 2.4 Flowchart

The flowchart represents the definitions of ‘consider’ and ‘suspect’ and should be referred to when reading all recommendations.


Indicator of maltreatment
Consider maltreatment
Maltreatment is a possible explanation for a report/clinical feature or is included in the differential diagnosis.
Record what you see and hear
Record the nature of your concern
Look for indicators of maltreatment in the history, parent-child interaction, or the child's presentation now or in the past
No action is not an option.
Discuss the case with a senior colleague and/or named or designated professional for safeguarding children
Gather collateral information from other disciplines within health
Review the child at a later date, looking out for repeated presentations of this or any other indicator
Record the action taken and the outcome
Suspect maltreatment
Serious concern about the possibility of child maltreatment but is not proof of it
Record what you see and hear
Record the nature of your
Follow local guidance on what to do when you think a child is being abused or neglected
MEANS
AND
OR

# 3 Points for clinical practice and definitions

## 3.1 Points for clinical practice

This guidance has been developed in order to help healthcare professionals overcome some of the obstacles to recognising child maltreatment and accepting that it commonly occurs. Some of these obstacles relate to the healthcare practitioners' professional and personal experiences (including maltreatment). Other obstacles include:

- concern about missing a treatable disorder
- healthcare professionals are used to working *with* parents/carers in the care of children
- discomfort of disbelieving, thinking ill of, suspecting or wrongly blaming a parent
- divided duties to adult and child patients
- breaching confidentiality
- difficulty in saying that a presentation is unclear and there is uncertainty about whether the presentation really indicates significant harm
- uncertainty about when to mention suspicion, what to say to parent(s) and what to write in the clinical file
- losing control over the child protection process and doubts about the benefits thereof
- child protection processes can be stressful and time-consuming
- personal safety
- acknowledging that maltreatment exists
- fear of complaints, litigation and dealings with professional bodies

This guidance aims to support healthcare professionals in recognition of maltreatment of a particular child who is in current need of intervention that will lead to protection. It offers guidance on identifying children who need further assessment to determine whether they need protection or need to be monitored. Children may require clinical investigations or interventions which are outside the child protection arena; this is outside the scope of this guidance.

The following themes have been identified:

- Risk factors are well recognised as alerting signs to the possibility of child maltreatment, for example:
    - parental drug and/or alcohol abuse,
    - mental health difficulties
    - intra-familial violence or history of violent offending
    - previous child maltreatment in members of the family or extended family
    - previous unexplained death of a child within a family
    - vulnerable and unsupported parents, including parents with learning disabilities

  This guidance does not examine in detail the risk factors for maltreatment.

- There are some clinical features that could indicate either current maltreatment or harm from past maltreatment, for example self-injurious behaviour, and are therefore included in the guidance.
- Information about a child may come from sources other than the child themselves.
- As child maltreatment has implications for the family, it is possible that siblings may be at risk. This could be the case, for example, when a child has suffered serious injury as a result of lack of parental supervision constituting neglect.
- The indicators of maltreatment in children with disabilities may also be features of the disability thus making identification of maltreatment more difficult.
- Some cultural practices may explain or be mistaken for child maltreatment.

Alerting features of maltreatment, either on their own or in combination, may be:

- the child's appearance
- the child's demeanour or behaviour
- a symptom
- a physical sign
- a result of an investigation
- an interaction between the parent/carer and the child
- a disclosure from the child or third party report.

If an alerting feature of maltreatment is observed or reported, healthcare professionals should seek information from the history, examination of the whole child and the context of the concern. Further information can also be sought from any professional who has had contact with the child. A chronology becomes one of the essential elements in the process of substantiating or disproving child maltreatment. Identification of child maltreatment is like piecing together parts of a jigsaw puzzle, some pieces of information carrying more weight than others.

In general, there are two types of recommendation in this guidance. The first is about suspecting child maltreatment and the second is about considering maltreatment in the differential diagnosis or as a possible explanation. The proposed definitions (see recommendations in this section) are key to understanding and using the remainder of the guidance as outlined in chapters 4 to 8.

To **suspect** maltreatment is the stronger of the two. It implies serious concern about the possibility of child maltreatment but is not proof of it. The healthcare professional should follow local guidance on "what to do when you're worried a child is being abused".[9] Instigating child protection processes may lead to the provision of supportive services for the child and family while keeping the family together; it may also lead to the removal of the child from the family or may lead to previously unidentified medical conditions being found.

The second type of recommendation - to **consider** maltreatment - means that maltreatment should be part of the differential diagnosis or a possible explanation of a clinical feature. If a child fits the criteria of a recommendation of this type, the healthcare professional should record the concern and take one or more of the following courses of action: look for other indicators of maltreatment, review the child, look for repeated presentations of this indicator, discuss the case with a suitable colleague, designated or named professional.

The recommendations in this section have been derived through GDG consensus. There was consensus within the GDG about the recommendations so the views of the Delphi panel were not sought.

### Recommendations

For the purposes of this guidance, to **suspect** maltreatment means serious concern about the possibility of child maltreatment but is not proof of it; healthcare professionals should:

- record exactly what they see and hear
- record the nature of their concern
- follow local procedures on what to do when they think a child is being abused or neglected.

This may trigger a child protection investigation, supportive services may be offered to the family following an assessment, or alternative medical explanations may be identified.

For the purposes of this guidance, to **consider** maltreatment means that maltreatment is a possible explanation for a report/clinical feature or is included in the differential diagnosis. In considering the possibility of child maltreatment, the healthcare professional should:

- record exactly what they see and hear
- record the nature of their concern
- look for indicators of maltreatment in the history, parent-child interaction or the child's presentation now or in the past. This may lead the healthcare professional to suspect child maltreatment.

No further action is **not** an option if maltreatment is considered.

Take one or more of the following courses of action, record the action(s) taken and the outcome:

- discuss the case with a senior colleague and/or a named or designated professional for safeguarding children
- gather collateral information from other disciplines within health and other agencies
- review the child at a later date, looking out for repeated presentations of this or any other indicator.

Healthcare professionals should seek an explanation for any injury that presents to them. Healthcare professionals should suspect child maltreatment when there is no explanation for a serious injury or the explanation proffered for any injury or presentation is implausible, inadequate or inconsistent with the child's presentation or medical condition. For example:

- discrepancies between the explanation and the child's age or developmental stage
- would not be expected to have occurred during this child's normal activities
- inconsistency in explanations between those given by the parent/carer and that given by child (unless the child is not at a developmental stage to give an account or it is considered inappropriate or not possible to obtain an account).
- inconsistency in explanations between those given by the child's parents or carers.

While not all disclosures may be accurate accounts of maltreatment, healthcare professionals should suspect maltreatment if they receive a disclosure from a child. The professional should explain to the child the need to discuss this with another appropriate professional and the fact that they cannot keep this confidential.

Healthcare professionals should call appropriately on other disciplines and agencies in the process of substantiating or not substantiating child maltreatment.

Healthcare professionals should be aware that some child maltreatment may be explained as, or mistaken for, cultural practice; a small number of cultural practices are harmful to children.

Healthcare professionals should act appropriately when considering or suspecting maltreatment even when they have an understanding of the background and reasons why the maltreatment might have occurred and even when there was no intention to harm the child.

Healthcare professionals should be aware that maltreatment in children with disabilities may be more difficult to recognise.

Healthcare professionals should be aware of deterrents to recognising possible child maltreatment, including fear of external challenges, risk of losing parents' confidence, resource implications and uncertainty about their suspicions.

Healthcare professionals should acknowledge that considering or suspecting maltreatment can be stressful and, when appropriate, should seek support from peers, senior colleagues and designated or named professionals.

## 3.2 Definitions of child maltreatment

For the purposes of this document, child maltreatment includes physical abuse, sexual abuse, emotional abuse, neglect and fabricated or induced illness. The following definitions of child maltreatment are provided in 'Working Together to Safeguard Children':[1]

**Physical abuse**

Physical abuse may involve hitting, shaking, throwing, poisoning, burning or scalding, drowning, suffocating, or otherwise causing physical harm to a child. Physical harm may also be caused when a parent or carer fabricates the symptoms of, or deliberately induces, illness in a child.

**Emotional abuse**

Emotional abuse is the persistent emotional maltreatment of a child such as to cause severe and persistent adverse effects on the child's emotional development. It may involve conveying to children that they are worthless or unloved, inadequate, or valued only insofar as they meet the needs of another person. It may feature age or developmentally inappropriate expectations being imposed on children. These may include interactions that are beyond the child's developmental capability, as well as overprotection and limitation of exploration and learning, or preventing the child participating in normal social interaction. It may involve seeing or hearing the ill-treatment of another. It may involve serious bullying, causing children frequently to feel frightened or in danger, or the exploitation or corruption of children. Some level of emotional abuse is involved in all types of maltreatment of a child, though it may occur alone.

**Sexual abuse**

Sexual abuse involves forcing or enticing a child or young person to take part in sexual activities, including prostitution, whether or not the child is aware of what is happening. The activities may involve physical contact, including penetrative (e.g. rape, buggery or oral sex) or non-penetrative acts. They may include non-contact activities, such as involving children in looking at, or in the production of, sexual online images, watching sexual activities, or encouraging children to behave in sexually inappropriate ways.

**Neglect**

Neglect is the persistent failure to meet a child's basic physical and/or psychological needs, likely to result in the serious impairment of the child's health or development.

Neglect may occur during pregnancy as a result of maternal substance abuse. Once a child is born, neglect may involve a parent or carer failing to:

- provide adequate food, clothing and shelter (including exclusion from home or abandonment)
- protect a child from physical and emotional harm or danger
- ensure adequate supervision (including the use of inadequate care-givers)
- ensure access to appropriate medical care or treatment.

It may also include neglect of, or unresponsiveness to, a child's basic emotional needs.

The recommendations in this section have been derived through GDG consensus. There was consensus within the GDG about the recommendations so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should use the definitions of child maltreatment within Working Together to Safeguard Children 2006 and its supplementary guidance. These include:

• exposure to domestic abuse

• prostitution

• exploitation or corruption of children and young people, including trafficking.

# 4 Physical features

## 4.1 Injuries

### 4.1.1 Bruises

Children sustain bruises in every day play and after accidents. Following accidental bruising, the commonest sites are the bony prominences often on the front of the body such as the knees shins, and sometimes the forehead. The eye area is usually protected from accidental bruising. Children with bleeding disorders sustain bruises more commonly than their peers who do not have such disorders. Medical conditions that result in petechiae can include platelet disorders and clotting factor deficiencies. Lesions that are similar to bruises or petechiae may also appear in children with meningococcal septicaemia. Petechiae are tiny red or purple spots that can result from physical trauma such as a excessive coughing, vomiting or crying or a squeezing type of injury. Bruises are also the commonest mode of presentation of physical child abuse.

#### Overview of available evidence

One systematic review was identified.

#### Narrative summary

The question of when bruises in children are diagnostic or suggestive of abuse was investigated in a narrative systematic review[10] which included 23 studies. Due to a lack of comparative studies (only two studies were comparative), the authors undertook a comparison by using nine studies that addressed bruising in non-abused children (two case control studies, four cross-sectional studies and three case series) and 16 studies that addressed bruising in abused children (two case control studies, one cross sectional study and 13 case series).

Apart from the age and developmental stage of the child, the location and pattern of bruising was found to be important for distinguishing between accidental and non-accidental bruising.

The conclusions of this paper are that the following patterns of bruising are suggestive of physical child abuse:

- Bruises in children who are not independently mobile
- Bruising in babies
- Bruises to the face (with the exception of the forehead), back, abdomen, arms, buttocks, ears and hands
- Bruises that are seen away from bony prominences
- Multiple bruises in clusters
- Multiple bruises of uniform shape
- Bruises that carry the clear imprint of the implement used or a ligature.

The authors emphasise that the interpretation of bruising always needs to take the context of medical and social history, the developmental stage, the explanation given and other available information into account. [EL=2+]

#### Evidence statement

A systematic review has summarised findings from studies on bruising.

### GDG considerations

The GDG supports the conclusions of the systematic review but notes that it is important to exclude bruises from every day activity, accidental injury, meningococcal septicaemia and other blood disorders that may appear as signs of bruising before suspecting child maltreatment. Drawing on its clinical experience, the GDG suggests that inflicted bruising can occur on more than one plane of the body, for example both sides of the face, as well as in clusters. The GDG believes that the age of a bruise cannot be judged reliably from interpretation of the colour of a bruise and should not be used in the assessment of bruises. The developmental stage of the child, however, is a reasonable indicator for suspicion, in that if a child is unable to move independently, bruising is unlikely to be accidental unless there is good history of an accident.

There was no evidence identified regarding love bites. Bruising from "love bites" may be identified as oval shaped lesions with a bruised or petechial appearance. The GDG believes love bites should be interpreted in a similar way to other bruises. An assessment of the age of the child or distribution (e.g. over breast area) may suggest child sexual abuse (CSA).

There was consensus within the GDG about the recommendations in this section. The Delphi panel's views were sought in relation to love bites (see statement 2a in section 4.1.2 Bites).

### Recommendations

Healthcare professionals should suspect child maltreatment when a child has bruising in the shape of an implement, for example hand, ligature, stick or teeth, or a grip mark.

Healthcare professionals should suspect child maltreatment when there is bruising or petechiae (tiny red or purple spots) in the absence of a causative coagulation disorder or other relevant medical condition where the explanation for the bruising is implausible, inadequate, inconsistent or discrepant with the pattern of the bruising or the developmental stage of the child. Presentations include:

- bruising in babies and children who are not independently mobile
- multiple bruises or bruises in clusters
- bruises of uniform appearance
- bruises other than on bony prominences, for example bruises on face and neck.

## 4.1.2 Bites

Any human bite mark on a child must have been deliberately inflicted. Bites are painful and cause bruising and lacerations to the skin. A bite mark presents as two opposing convex arcs giving an oval appearance and occasionally a central bruise. The arcs may contain irregular indentations from individual teeth of the perpetrator. Bites from animals have a different appearance. Love bites are considered in the Delphi survey in this section and in section 4.1.1 (bruises).

### Overview of available evidence

One systematic review was identified.

### Narrative summary

A systematic review of abusive bite marks in children (end search date June 2007) identified five case studies where bites had been inflicted.[11;12] Four of the children were younger than 30 months and one was in her teens. The perpetrator was a child in one case. [EL=2+] No suitable published literature was found that links animal bites to maltreatment.

### Evidence statement

The literature on abusive bite marks in children is sparse, with only five reported incidents of abusive bite marks.

Please refer to pp33-34 for the definition of 'suspect' and its associated actions.

### Delphi consensus (see also Appendix C)

The GDG sought the opinions of the Delphi panel on their opinions about bite marks. The following statements were drafted:

**Round 1**

| Statement number | Round 1 | % agreed | n | Outcome |
|---|---|---|---|---|
| 1a | Healthcare professionals should suspect child maltreatment when there is a report or appearance of a human bite mark, on a child, suspected to be caused by an adult. | 92 | 95 | See below |
| 2a | Healthcare professionals should consider child maltreatment when a prepubertal child has love bites. | 86 | 95 | Despite agreement at Round 1, the GDG felt that love-bites would be better captured in the statement on bruises. |
| 3a | Healthcare professionals should consider child maltreatment when a child has self-inflicted bites. | 60 | 94 | Statement rejected. See below |
| 4a | Healthcare professionals should consider child maltreatment when a child has animal bites. | 41 | 94 | Statement amended for round 2. See below. |

*Statement 1a*

92% of respondents agreed with statement 1a:

There was strong agreement that adult bite marks should be a reason to suspect maltreatment but because of anxieties about recognising bite marks from adult dentition, the statement was revised for round 2 (see statement 1b below).

*Statement 2a*

This statement was not considered further in this section (see section 4.1.1 bruises).

*Statement 3a*

Some of the reasons that only 60% of respondents agreed with statement 3a about self-inflicted bites were:

- it depends on learning disability
- it is difficult to distinguish bites made by child dentition and bites made by adult dentition without expert input.

The GDG decided at this point that self-inflicted bites should be considered under self-inflicted injury (see section 7.2.1 Self-harm).

*Statement 4a*

Some of the reasons that only 41% of respondents agreed with the above statement about animal bites were:

- it depends on the animal
- it depends on the level of supervision

The statement was revised for round 2 in the light of these comments (see statement 4b below).

**Round 2**

| Statement number | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|
| 1b | Healthcare professionals should suspect child maltreatment when there is a report or appearance of a human bite mark on a child, in the absence of an independently witnessed incident of biting by another young child to account for the mark | 71 | 82 | Despite agreement at round 1, the GDG wanted to address the issue of children biting one another. The Round 2 statement was rejected and the Round 1 statement retained. |

| | | | | |
|---|---|---|---|---|
| 4b | Healthcare professionals should consider neglect when there is a report or appearance of an animal bite in a child who has been inadequately supervised. | 77 | 83 | Round 2 statement accepted. |

#### GDG considerations

The evidence base in this area is weak so the GDG made consensus-based statements and sought the opinions of the Delphi panel on this topic (see above and section C.2.1).

It can be difficult for healthcare professionals to ascertain the provenance of a bite mark and the GDG acknowledges that bites can be caused by young children in their play activities. Having attributed a mark to an adult human, the GDG concludes that inflicted injury has occurred and maltreatment should be strongly suspected.

Animal bites can occur when a child has not been adequately supervised and, if there is evidence of a lack of supervision, the GDG believes that healthcare professionals should consider neglect.

The GDG accepted statements 1a and 4b from the Delphi survey.

#### Recommendations

Healthcare professionals should suspect child maltreatment when there is a report or appearance of a human bite mark, on a child, suspected to be caused by an adult.

Healthcare professionals should consider neglect when there is a report or appearance of an animal bite in a child who has been inadequately supervised.

### 4.1.3 Cuts and abrasions

Children can sustain cuts and abrasions which may lead to scars from accidents. These are usually from falls and will occur in a similar distribution to bruises, namely to the front of the body and over bony prominences knees, shins, forehead. These are generally minor injuries and are treated in the home (see also section 7.2.1 on self-harm).

#### Overview of available evidence

No suitable published literature was identified that documented associations between cuts and abrasions and child maltreatment.

#### GDG considerations

The GDG found no suitable published literature on the question of when cuts, abrasions, scars and scratches are reasons to suspect child maltreatment. The GDG consensus is that, similar to other soft tissue injuries, a healthcare professional should consider the site, pattern and distribution, the characteristics, presentation and explanation of the injuries in order to decide whether to suspect maltreatment. The GDG recognises that these presentations can be consistent with deliberate self-harm (see section 7.2.1).

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

#### Recommendation

Healthcare professionals should  suspect child maltreatment when a child has cuts, abrasions or scars that are in the shape of an implement or linear injuries around the neck, wrists or ankles suggesting ligatures or attempted strangulation.

Healthcare professionals should suspect child maltreatment when a child has cuts, abrasions or scars when the explanation is implausible, inadequate, inconsistent or discrepant with the pattern of injury or the developmental stage of the child. Presentations include:

• cuts and abrasions in babies and children who are not independently mobile

Please refer to pp33-4 for definitions of ‘consider’ and ‘suspect’ and their associated actions.

- multiple injuries of uniform appearance
- an injury to the genital area
- injuries with a symmetrical distribution
- there are injuries to areas usually protected by clothing (including back, chest, abdomen, axilla)
- injuries to the mouth, eyes, ears, neck and sides of face
- a pattern of previous or repeated injuries, for example multiple scars.

### 4.1.4 Thermal injuries

Young children need constant supervision around hot items in the household. Cooking implements and containers of hot liquids must be kept well out of reach of the inquisitive child. It takes less than a second for a child to sustain a full thickness burn from a liquid at 100°C. Children can sustain accidental scalds from liquids such as hot cups of coffee or tea and burns from contact with hot objects around the household. Burns more infrequently result from flames, chemicals and electrical items. Burns are painful and can result in mortality, cause life long scars and psychological damage.

#### Overview of available evidence

The question, "what patterns of burns in children are seen in physical abuse?" was investigated separately for scald burns and non-scald burns in two systematic reviews by the same research group.[13;14]

#### Narrative summary

The identification of intentional scald burns in children in contrast to accidentally sustained scalds was investigated in a well conducted systematic review which included 26 studies comprising one case-control study, eight cross sectional studies and 17 case series and case studies.[13] [EL=2+]

Apart from the usual exclusion criteria such as review papers and personal experiences, the authors excluded scalds that were due to neglect and studies that combined scald and contact burn data.

There was no evidence of a difference in gender, age of the child or the total body surface area affected between intentional and accidental scalds. Other features were grouped according to whether a scald is likely to be intentional based on the evidence level of the studies reporting those features.

The following features indicate that intentional scalds are likely:

- immersion scalds or scalds from hot tap water indicated by
  - the presence of clear upper limits or symmetric scalds on the extremities
  - isolated scald on the buttock or perineum with or without scald injuries on the lower extremities
  - isolated scald injuries on the lower extremities
- child is presented with associated unrelated injuries
- the history given is incompatible with examination findings
- co-existing fractures or other injuries
- a child is passive, introverted or fearful
- there is a history of previous abuse or domestic violence
- numerous prior accidental injuries.

The presence of one or more of the following features indicates that intentional scalds should be considered:

- scald is of uniform depth, flexures are spared, the centre of the buttock is spared, or the scald appears like a glove or stocking on one or more limbs
- previous burn injury

- neglect/faltering growth
- history inconsistent with assessed development.

Historical/Social features:

- trigger such as soiling, enuresis, misbehaviour
- differing historical accounts
- lack of parental concern
- unrelated adult presenting child
- child known to social service.

The strength of evidence for this review is limited by the small number of good quality studies containing comparative data, the relatively small number of children included, the retrospective design and the lack of consistency between studies that does not allow a formal meta-analysis.

The systematic review about non-scald burns consists of 25 case series or studies.[14] The conclusion of the review is that the history should be taken carefully, the clothing should be examined for suspected caustic burns and the burn be matched to the potential burn agent. The review is limited through the scarce evidence base, hence it describes a small number of children (84 children in total of which 59 were abused). There were no comparative studies of cigarette burns and a lack of comparative data for contact burns.

### GDG considerations

Burn injuries can be inflicted or accidental; some burn injuries can be due to neglect through lack of supervision. The GDG believes that it is difficult to untangle these issues and therefore the story that accompanies a burn injury should be scrutinised for consistency with the injury.

Despite the low evidence level of the literature reviewed in the published systematic review, the GDG agrees with the recommendations made therein, based on its own clinical experience. The GDG also believes that parents or carers may delay seeking medical attention when a burn injury has been intentional.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

**Recommendations (see section 5.1 general features of neglect)**

Healthcare professionals should suspect child maltreatment in a child with burn or scald injuries:

- when the explanation is absent, implausible, inadequate, inconsistent or discrepant with the pattern of thermal injury or the developmental stage of the child
- in babies, or children who are not independently mobile
- scalds that are indicative of forced immersion, for example,
  - scalds to buttocks, perineum and lower limbs
  - scalds to limbs in a glove and/or stocking distribution
  - scalds to limbs with symmetrical distribution
  - scalds with sharply delineated borders
- contact burn/scald injuries on the backs of hands and soles of feet, buttocks, back and soft tissue areas that would not be expected to come into contact with a hot object in an accident, or
- contact burns in the shape of the implement used for example, cigarettes, irons.

Please refer to pp33-4 for definitions of ‘consider’ and ‘suspect’ and their associated actions.

### 4.1.5 Cold injury

Injuries due to the cold can occur when a child's basic care needs have not been met. This could be due to the failure to provide adequate clothing or shelter. Lack of provision is considered in section 5.1.

#### Overview of available evidence

No suitable published literature was identified that documented associations between cold injury and child maltreatment.

#### GDG considerations

In the absence of suitable evidence, the GDG suggests that injuries due to the cold such as swollen, red hands or feet where there is no medical cause can be reason to consider child maltreatment in the context of the persistent failure to provide adequate warmth, clothing or shelter over a period of time. Similarly, hypothermia without an adequate explanation in a child should be a reason to consider child maltreatment.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendation

Healthcare professionals should consider child maltreatment when a child has swollen, red hands and feet without obvious medical cause or when a child presents with hypothermia with no adequate explanation.

### 4.1.6 Hair loss

Hair can be traumatically pulled out or can fall out spontaneously or because of scalp infections.

#### Overview of available evidence

No suitable published literature was identified that documented associations between hair loss and child maltreatment.

#### GDG considerations

Hair loss in children can be caused by hair pulling or spontaneous hair loss. The GDG identified no literature that suggests spontaneous hair loss occurs secondary to maltreatment. In the GDG's opinion, hair loss caused by inflicted hair pulling constitutes physical abuse. It is the GDG's experience, however, that children can pull each other's hair while fighting so it is important to establish who has inflicted the hair-pulling. Hair loss due to self-inflicted hair pulling may be a sign of emotional distress that could be due to maltreatment in the absence of a medical cause or other definable stressor.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendations

Healthcare professionals should consider  child maltreatment when a child has hair loss due to inflicted hair-pulling.

### 4.1.7 Fractures

Children sustain fractures from accidental injury. The majority of accidental fractures are seen in children older than five. Up to 60% of children will have sustained a fracture by the age of 16. Bone fractures or breaks are the result of stress on the bone. The amount of mechanical stress required to cause a fracture is influenced by a number of factors with diseases such as osteogenesis imperfecta and osteoporosis reducing significantly the force required. Any non-accidental fracture represents a serious

Please refer to p35 for the definition of 'consider' and its associated actions.

assault and a fracture where maltreatment is suspected must be investigated. Many non-accidental fractures in infants and toddlers are occult and are not clinically evident on physical examination.

### Overview of available evidence

One systematic review and five additional studies have been included.

### Narrative summary

A systematic review (1950 to April 2007) that includes 32 comparative studies investigated 'Which fractures are indicative of abuse?'[15] The authors highlighted concerns about the quality of papers available. The main concerns were:

- considerable heterogeneity between studies
- wide age ranges studied
- variable radiological techniques employed
- wide variation in definitions of abuse used in studies.

Statistical methodology adopted for the meta-analysis acknowledged these concerns. A random effects model was used. This method models heterogeneity by assuming that each study has a probability of abuse associated with it and that these form a probability distribution between studies. This probability distribution was estimated by a Bayesian method, using WinBugs[16] and a 95% credible interval was derived to summarise the probability of abuse.

The review was able to report two general findings:

- fractures from child abuse are most common in children less than 18 months of age
- multiple fractures are more suspicious of abuse.

Below the results for specific locations are outlined.

### Rib fractures

Seven studies were suitable for meta-analysis, with a total of 233 children of whom 128 had been abused, 24 had diagnosed bone dysplasia, 17 were pre-term babies with perinatal complications , 43 were due to motor vehicle accidents or violent trauma, seven had post-surgical fractures, three had birth injuries and 11 had fractures from unknown or non-abusive causes. The study found the overall probability that rib fractures are due to abuse was 71% (95% credible interval (CrI) 42% – 91%) when motor vehicle crashes (MVCs), documented violent trauma and post-surgical cases were excluded. The conclusions made about rib fractures were:

- rib fractures in the absence of major trauma, birth injury or underlying bone disease have the highest specificity for abuse
- multiple rib fractures are more commonly abusive than non-abusive.

### Femoral fractures

Thirteen studies were suitable for meta-analysis and included a total of 1100 children, of whom 222 were classified as abused, 120 were suspected to have been abused; 223 of the children had been involved in MVCs or violent trauma, 29 had a pathological fracture and 509 were from other non-abusive incidents. Once MVC's had been excluded, the estimated probability of suspected abuse given a femoral fracture was 43% (95% CrI 32% -54%).

Data from five studies indicate that children with femoral fractures due to abuse are younger than those with femoral fractures not due to abuse. There were no significant differences between the groups on location of fractures. The conclusions made about femoral fractures were:

- abusive femoral fractures occur predominantly in infants
- significantly more abusive femoral fractures arise in children who are not yet walking
- transverse fracture is the commonest fracture in abuse and non abuse (analysed for all age groups)
- under 15 months of age a spiral fracture is the commonest abusive femoral fracture p=0.05

### Humeral fractures

Six studies met inclusion criteria, of which four were suitable for meta-analysis. There were 154 children; 30 were abused, 23 suspected abuse, one motor vehicle accident and 100 accidents. The overall pooled probability that a fractured humerus was due to suspected abuse was 54% (95% CrI 20%–88%). The probability that a fractured humerus was due to confirmed abuse was 48% (95% CrI 6%-94%). Supracondylar fractures were reported to be more likely associated with non-abusive injury than abusive injury.

### Skull fractures

Seven studies were suitable for meta-analysis. These involved a total of 520 children all under 6.5 years; 124 were classified as abused, 18 were MVCs or violent trauma and 378 were non-abusive. The overall probability that a skull fracture was due to suspected abuse was 30% (95% CrI 19%,- 46%) .

The most common fractures in both the abuse and non-abuse groups were linear and therefore non-discriminatory. Two studies suggest that complex fractures were more common in severely abused children and two studies showed no difference.

### Metaphyseal fractures

There were no published comparative studies of children with metaphyseal fractures. Two studies of femoral fractures found that femoral metaphyseal fractures were more common among abused infants but data were not suitable for meta-analysis.

### Other fractures (spinal, pelvic, hands and feet, mandibular, sternal)

Other fractures were assessed. The review found that:

- vertebral, pelvic, hands, feet and sternal fractures occur in physical abuse
- appropriate radiology is required for detection
- vertebral fractures may be unstable, early identification is important (see section 4.1.10 spinal injury)

This is a high quality systematic review. However, readers should not place too much emphasis on the pooled results, as meta-analysis of observational studies often results in false precision; confidence intervals are wide and reflect the high degree of heterogeneity between studies. [EL = 2+]

### Additional studies

Five additional studies were identified.

A retrospective case-series (n = 76) from the UK published in 2006 examined the skeletal surveys of children (not defined) with suspected maltreatment (based on skeletal survey being ordered). 42 fractures were identified in 17 children; there were 22 rib fractures, 8 tibia, 4 femur, 3 metatarsal and one each of radius, ulna, humerus, clavicle and skull. Nine children had only one fracture and three children had at least five. [El = 3][17]

A retrospective case-series that used an administrative database (2500000 with 1794 non-accidental musculoskeletal injuries) from the USA published in 2007 examined musculoskeletal injury (not only fractures) in abused children. The study found the following profile of injuries by age:

- 49% (875) < 1 year: skull 202, ribs = 159, femoral neck/femur – 150, tibia/ankle/fibula – 98, Humerus = 74
- 19% (345) 1 to 2 years : skull 56, ribs = 16, femoral neck/femur – 26, radius – 17, Humerus = 28
- 18% (316) 3 to 12 years: skull 12, ribs = 4, femoral neck/femur – 12, radius – 13, Humerus = 6
- 14% (258) 13 to 20 years: skull 19, ribs = 1, tibia/ankle/fibula – 3, carpal – 3, Humerus = 3

*Other injuries*

| Age | <1 | 1-2 | 3-12 | 13-20 |
|---|---|---|---|---|
| Internal injuries | 44 | 54 | 30 | 8 |
| Wounds | 48 | 40 | 44 | 54 |
| Contusions | 280 | 243 | 172 | 73 |
| Burns | 22 | 111 | 47 | 6 |

Of the 1794 children, 309 (17.2%) had psychiatric or neurological co morbidity. [EL = 4][18]

A cohort study (n = 467) of children from the UK published in 2002 examined fractures in suspected maltreatment (child not defined, maltreatment based on referral to court). The study found that 268 children had multiple fractures and 140 had solitary fractures. The specific locations of fractures were:

*Multiple fractures*

Skull = 88

Metaphyseal = 134

Long bone = 215

Ribs = 154

*Ribs*

Unilateral – neck = 24, shaft = 51, both = 8

Bilateral – neck = 5, shaft = 39, both = 27

*Skull*

Single = 86

Multiple bilateral = 29

Unilateral = 11

*Isolated Long-bone*

Femur = 25

Tibia = 14

Humerus = 27

Forearm = 9

Clavicle = 2

Rib = 11

[EL = 4][19]

A retrospective case-series (n = 108) from New Zealand of children (not defined) referred to child protection services for investigation reported on the locations of fracture and the occurrence of multiple fractures.

*Location of fractures*

Clavicle = 5

Humerus = 29

Radius and ulna = 18

Hand = 1

Ribs = 24

Vertebra = 1

Femur= 29

Tibia/fibula = 29

Foot = 1

Skull = 33

Pelvis = 1

*Multiple fractures*

1 = 41

2 = 12

3 = 23

4+ = 18

[EL = 4][20]

A retrospective chart review of children younger than 3 years (n=127) with femoral fractures investigated injury patterns and circumstances of injury.[21] There were 14 children with non-accidental injuries, ten of whom had an absent or inconsistent explanation or an unwitnessed injury. There were no specific fracture sites or types in the abuse group compared to the accidental injury group. Multiple injuries were found in 6/14 of the non-accidentally injured children compared to 13/113 in the accidental injuries group. [EL=4]

### GDG considerations

Evidence from one systematic review and five additional studies show that fractures in children can be indicative of maltreatment. These studies confirm that children under the age of 18 months are at a heightened risk of sustaining a fracture from physical abuse. No one fracture is characteristic of physical abuse. The probability that fractures are due to maltreatment is increased where multiple fractures are present or the child is yet to gain independent mobility. However, the available evidence from observational studies is inherently open to bias and reported confidence intervals are likely to greatly underestimate the true variance. There is very little comparative data on metaphyseal fractures or fractures other that ribs, long bones or skull fractures.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

### Recommendations

Healthcare professionals should consider child maltreatment when a child has a fracture in the absence of overt traumatic cause or known medical condition that predisposes to fragile bones (e.g. osteogenesis imperfecta, osteopenia of prematurity), particularly in children under 18 months.

Healthcare professionals should suspect child maltreatment when a child has a fracture and the explanation is absent, implausible, inadequate, inconsistent or discrepant with the pattern of fracture or the developmental stage of the child. Patterns include:

- multiple fractures
- multiple fractures of different ages
- x-ray evidence of occult fractures (fractures identified on x-rays that were not clinically evident), for example rib fractures in infants and toddlers.

### Research Recommendation

How can abusive fractures, those resulting from conditions that lead to bone fragility and those resulting from accidents be distinguished, particularly in relation to metaphyseal fractures?

Please refer to pp33-4 for definitions of ‘consider’ and ‘suspect’ and their associated actions.

*Why this is important*

A prospective comparative study of fractures in physical abuse, conditions leading to bone fragility and those resulting from accidental trauma to encompass a study of metaphyseal fractures specifically is needed because the existing evidence base does not fully account for differential diagnosis of fractures in the infant and toddler age group.

### 4.1.8 Intra-cranial injuries

Abusive head injury with associated intra-cranial injury has an estimated incidence of 35 per 100,000 children under six months, 14-21 per 100,000 children 0-1 year, 0.3 per 100,000 children 1-2 years old.[22;23]

#### Overview of available evidence

The GDG referred, with permission, to work in this area by the Welsh Child Protection Systematic Review Group. It is, as yet, unpublished. Skull fractures and bruising to the head from physical abuse is addressed in sections 4.1.7 (bruises) and section 4.1.1 (bruises).

#### Narrative summary

Two systematic reviews (search end date 2007) were identified that compared features and neuroimaging of abusive head injury with non-abusive head injury in children. Studies were included if the child presented to hospital alive and neuroimaging was completed. Fourteen studies were included in the clinical features review representing 779 abused and 876 non-abused children. Eighteen were included in the neuro imaging review.[24]

Eight studies showed that the age of children with abusive head injury was significantly younger than non-abused children and two studies found no difference. The mean age of abused children was less than one year in all studies and ranged from 4.8 months to 35.5 months for non-abused children. Intra-cranial injuries considered in the studies were subdural haemorrhage (SDH), subarachnoid haemorrhage and traumatic brain injury. The inclusion criteria for the comparison groups varied across studies.

Eight studies recorded whether there was an explanation of trauma and they all noted a significantly greater number of children in the abuse group with no explanation of trauma. Seven studies recorded minor trauma (a fall under 4ft): of these, three were general head injury studies and showed no difference between groups. Three of the four studies of children with traumatic brain injury or subdural haemorrhage showed that more children in the abuse group gave a history of minor injury and seven studies found that a history of major trauma was reported significantly more often in non-abused compared to abused children. In five studies there were recorded cases of “admitted assault”.

**Neuro-imaging**

*Subdural haemorrhage:*

The fourteen comparative studies that reported the number of children with subdural haemorrhage showed that SDH was significantly more prevalent in abuse than non-abuse. Multiple haemorrhages, those over the convexity and in the interhemispheric fissure were more common in abuse than non abuse. Abusive SDHs were more likely to be of different or mixed attenuation on MRI or CT scan.

*Subarachnoid haemorrhage*

Ten studies compared subarachnoid haemorrhage in abuse and non-abuse; nine of these studies showed no difference between the prevalence of subarachnoid haemorrhage in either group and one that SAH was commoner in abusive head injury.

*Extradural haemorrhage*

Eleven studies compared extradural haemorrhage in abused and non-abused children. Four studies noted that they were significantly more prevalent in non-abuse and the remainder found no significant difference.

*Hypoxic ischaemic injury*

One good quality MRI study showed that hypoxic ischemic injury was more common in abusive head trauma than non abusive head trauma.

**Associated features**

*Retinal haemorrhages*

Ten studies compared retinal haemorrhages in abused and non-abused children. Six studies stated the number of non-abused children who were examined and all noted that a significantly higher number of children with abuse had associated retinal haemorrhage. In studies of children with subdural haemorrhage or traumatic brain injury, the prevalence of retinal haemorrhage in the abuse group ranged from 50-86% but not all cases had an ophthalmological examination. In one study, all cases were known to be examined and 77% of the NAHI group had retinal haemorrhage compared to 20% in the non-abused group (see also section 4.1.9 eye trauma).

*Skull fracture*

There were 13 studies that addressed skull fractures. Two studies showed that abused children with intra-cranial injury had higher rates of fractures than non-abused children. The comparison groups were biased towards non traumatic causes in one study and excluded MVC in the second study. Four studies showed no significant difference between abused and non-abused children. Five studies showed a highly significant correlation of skull fracture and intra-cranial injury with non-abuse.

*Skeletal fractures*

Eight studies addressed coexisting rib and/or long bone fractures with NAHI, of which seven found more fractures in abuse than non-abuse. However, non-abused cases were incompletely investigated with respect to skeletal survey. Fractures co-exist with 46% to 70% of NAHI that includes intra-cranial injury.

*Seizures and apnoea*

Seven studies were identified and all showed that there was a greater association of seizures with abuse in children with traumatic brain injury (TBI) than without TBI. Two studies showed that apnoea was more strongly associated with abuse than non-abuse

**Impaired consciousness**

Six studies addressed impaired consciousness at presentation, of which five showed no significant difference between abused and non-abused children. One study showed that impaired consciousness was significantly more prevalent in abuse than non-abuse. [EL=2]

### GDG considerations

There is a strong evidence base that states that abusive head injury occurs primarily in babies and infants. These children present with a varied clinical presentation from the moderately ill to infants who are unconscious. Intra-cranial injury includes subdural haemorrhages, with or without subarachnoid haemorrhages, which are often small, multiple and widely distributed. Hypoxic ischemic injury is more commonly associated with abusive head injury than accidental head injury. There is a strong association between intracranial injury and retinal haemorrhages, apnoeic episodes and skeletal fractures. Children with abusive head injury may present with impaired neurology and no external sign of injury.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

### Recommendations (See also 4.1.1 bruises, 4.1.7 fractures, 4.1.4 thermal injury, 4.1.3 cuts and abrasions)

Healthcare professionals should suspect child maltreatment in any child with any clinical feature of intra-cranial injury in the absence of confirmed major accidental trauma or known medical cause:

- when there is an absent, implausible, inadequate or inconsistent explanation
- in an infant or toddler

Please refer to pp33-34 for the definition of ‘suspect’ and its associated actions.

- when there are intra-cranial injuries in association with:
  - retinal haemorrhages
  - rib and/or long bone fractures
  - other associated inflicted injuries
- when there are multiple extra axial bleeds including subdural haemorrhage and subarachnoid haemorrhage, with or without hypoxic ischaemic damage to the brain.

### 4.1.9 Eye trauma

Damage to the eye, as opposed to periorbital structures such as eyelids, as a result of child maltreatment is manifested as retinal haemorrhage, subconjunctival haemorrhage, hyphema or bruising. Retinal haemorrhage is often associated with trauma to the head, particularly in the context of shaken baby syndrome. External injuries to the eye are covered under bruises (section 4.1.1) and cuts and abrasions (section 4.1.3).

#### Overview of available evidence

Many papers retrieved on injuries to the eye discuss retinal haemorrhage in the context of head trauma (see section 4.1.8, intra-cranial injuries).

#### Narrative summary

In one report[25] and an update to it[26], the ophthalmology child abuse working party has considered questions relating to the effects on the eye of shaking or indirect trauma to the head in infants and young children. [EL=4]

The working party has concluded that:

- retinal haemorrhages are more likely to be due to non-accidental injury than accidental injury
- unilateral retinal haemorrhages can occur in child abuse
- in children under 2 years, retinal haemorrhage is highly unlikely to be caused by rough play or an attempt to arouse an apparently unconscious child
- birth-related retinal haemorrhages are common.

One prospective cohort study (n=150) of consecutive referrals for craniocerebral traumatic lesions reported data on retinal haemorrhage in 129 children (median age 3.6 months) excluding neonates.[27] Fifty-six children were found to have been abused, and of these, 75% had a retinal haemorrhage. Of the accidental trauma group, 7% (n=73), had a retinal haemorrhage. There was a high level of confirmation of abuse. [EL=2+]

No papers that met our inclusion criteria were retrieved on subconjunctival haemorrhage.

#### GDG considerations

The evidence about eye injury in maltreatment is largely confined to retinal haemorrhages which are closely associated with non accidental head injury. The GDG supports this association and are of the opinion that retinal haemorrhages in a young child should alert healthcare professionals to the possibility of non-accidental head injury and should be interpreted in that context (see section 4.1.8). In the absence of evidence relating other eye injuries to maltreatment the GDG came to a consensus decision that other injuries to the eye should be assessed in the light of the explanation given. If the explanation was absent or not typical of accidental injury maltreatment should be suspected.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should suspect child maltreatment when a child has retinal haemorrhages in the absence of major accidental trauma or a recognised medical cause including birth-related causes.

Healthcare professionals should suspect child maltreatment when a child has an injury to the eye and/or eyelids when the explanation is absent, implausible, inadequate, discrepant with the pattern of the injury or the developmental stage of the child or inconsistent.

### 4.1.10 Spinal injuries

Spinal injury is rare in childhood. Spinal lesions may cause death or lead to permanent neurological sequelae.

#### Overview of available evidence

A systematic review was identified that set out to characterise the signs and symptoms of abusive spinal injury.

#### Narrative summary

A systematic review (search dates 1975 to 2006) included 15 studies representing information on 33 children. Mortality was high, with 26/33 children fatally injured; two of the seven survivors had quadraplegia. The median age of presentation was six months (range 1.2 to 48 months). Diagnosis was delayed in seven cases as the condition was not suspected. Statements of witnesses and confessions of the perpetrators were recorded.[24]

*Cervical spine injuries*

Of the 33 cases, 25 had sustained cervical injuries. More than half of the children with cervical injuries (13/25) were younger than six months. Focal neurological signs, apnoea and signs of raised intracranial pressure and general neurological deterioration were typical presenting features. Seventeen children (68%) had significant head trauma (intracranial bleed, skull fracture) and 94% had retinal haemorrhages. Among the children with cervical spine trauma 17 had a definite history of shaking.

*Thoraco-lumbar injuries*

Seven cases had thoraco-lumbar injuries. (median age of 14 months, range 9 to 16 months). These included three thoracic, one lumbar and three thoraco-lumbar injuries. Presenting features included focal neurological signs and orthopaedic deformity, a feature not noted among the cervical injuries. Only two cases had significant head injury

*Types of spinal injuries*

These were classified as skeletal injury (bony injury, ligamentous injury), lesions involving both, cord injury with or without skeletal injury and spinal cord injury without radiological abnormality.

*Skeletal injury*

Six cases had fracture with subluxation with or without angulations and two had compressed body with displacement. They had associated changes on imaging suggesting spinal cord trauma. Two cases had fracture only. Detailed neuropathology from autopsy findings was given in 18 cases. These involved cranio-cervical junction axonal injury (5), spinal cord necrosis and bleeding (1), cervical cord axonal injury beta AAP positive staining (7) and haematoma on high cervical cord with contusion (5).

#### Evidence statement

One systematic review suggests that spinal injury is uncommonly reported in child abuse and that it may easily be missed. More than 50% of cases with cervical trauma were less than six months old and had associated significant head injury and retinal bleeds. Given the subtle presentation of cervical injuries, these may be masked by associated symptoms or may remain asymptomatic and go undiagnosed. The thoraco-lumbar lesions occurred in older infants or toddlers and did not show the same association with

Please refer to pp33-34 for the definition of ‘suspect’ and its associated actions.

abusive brain injury. Here, there were clinical signs (neurological or orthopaedic) yet diagnosis was frequently delayed.

### GDG considerations

Vertebro-spinal injuries of all causes are rare in children and most are associated with a history of significant trauma such as MVC. Abusive spinal cord injury causes significant morbidity and mortality. The literature reports only cases where there were confessions of perpetrators or statements of witnesses. Therefore the GDG concludes that the absence of an appropriate explanation should be a cause for concern.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

### Recommendations

Health professionals should suspect physical abuse when a child presents with signs of a spinal injury (injury to vertebrae or within the spinal canal) in the absence of witnessed significant trauma. This may also present as:

- a finding on skeletal survey or magnetic resonance imaging
- cervical injury in association with inflicted head injury
- thoracolumbar injury in association with focal neurology or unexplained kyphosis.

## 4.1.11 Visceral injuries

Visceral injury includes both thoracic and abdominal injury in children and can follow both non-intentional trauma including MVCs, falls, and bicycle handlebar and lap-belt injuries but can also result from physical abuse and have a serious outcome including death. Much more is known about abdominal trauma than thoracic injury which appears to be rare. Inflicted injury in children accounts for between 4% and 15% of all abdominal trauma and most children affected are aged less than five years. Injuries following abuse include rupture or haematoma to hollow organs (stomach, small bowel, including duodenum and rectum), pancreatic injury including unexplained pancreatitis, solid-organ lacerations, or contusions (liver, spleen, kidney), and injury to major blood vessels (mesenteric vessels are especially vulnerable). Where there is no history of injury and no external bruising to the abdomen, the diagnosis will present a challenge in a sick collapsed child who may have been presented some time after the injury occurred. However child abuse will need to be considered with any injury which is inadequately explained.

### Overview of available evidence

There was a paucity of comparative studies and large case series in this area. We identified two retrospective studies investigating differences between inflicted and non inflicted injuries[28;29] and one concentrating on abdominal injuries.[30] All three studies provided epidemiological information.

### Narrative summary

A retrospective review of patients attending a trauma centre (n=121, aged younger than six years) found 13 children in whom injuries had been inflicted, 77 who had suffered a high velocity accident and 31 who had suffered a low velocity accident.[30] Children were excluded from the study if they had an associated neurological injury, an abdominal injury secondary to severe thoracic injury, injuries that could not be classified as accidental or inflicted or, in some child abuse cases, where there was a level of denial that trauma had occurred. Despite the small sample, injuries to the hollow viscus were found to be more common in child abuse cases than accidental injury cases. There was no significant difference between the groups of incidence of injury to solid organs. 82% of accidental injuries were brought to medical attention within 12 hours compared to 46% of inflicted injuries. Median abbreviated injury scale (AIS) score was significantly higher in the inflicted group compared to high velocity trauma and low velocity trauma groups. [EL=2-]

Please refer to pp33-34 for the definition of ‘suspect’ and its associated actions.

A review of data from the USA based national paediatric trauma register selected children less than five years of age who had been hospitalised over a ten year period.[28] A diagnosis of child abuse was ascertained at the treating hospital. There were 1997 abuse cases and 16831 children who had suffered unintentional injury. Thoracic injury was more likely in children who had been maltreated than in those who had not (OR=1.70 (CI 1.39, 2.08)). Similarly, abdominal injury was more likely in the maltreated group (OR=2.71 (CI 2.23, 3.29)). [EL=2-]

A follow up to this study retrieved records from 1997-2001. There were 927 children younger than five years who had suffered blunt abdominal trauma.[31] Of these, 63% were due to MVC, 16% were due to abuse, 14% were due to a fall and 8% were due to other causes. After excluding MVCs, abuse accounted for 79% of injuries in children younger than 12 months, 61% in children aged between 13 and 24 months, 39% in children aged between 25 and 36 months and 25% in children aged between 37 and 48 months. [EL=2-]

The fourth study reviewed medical records from a children's hospital over a nine year period.[29] There were 5733 cases of accidental trauma and 453 cases of non-accidental trauma. The incidence of thoracic injury was lower in the accidental trauma group than the non-accidental trauma group (6.0% of children vs 17.0% of children, $p<0.001$). There was no significant difference between the groups of the incidence of abdominal injury (7.6% accidental) vs 8.6% (non-accidental)). [EL=2-]

#### Evidence statement

The evidence base suggests that visceral injuries do occur in cases of maltreatment, and more commonly in non-accidental than accidental injury.

#### GDG considerations

Visceral injuries are found in cases of child maltreatment. Injuries to hollow viscus and delayed presentation were more common in cases of child maltreatment. Visceral injuries can present as acute pancreatitis. The GDG's opinion is that visceral injuries due to child maltreatment can sometimes be missed because of the way they present; there may be no bruises even if the injury was inflicted. The GDG found no reason to make age categories for the suspicion of maltreatment. As with other abusive injuries, the explanation given for the injury may not be compatible with the child's developmental stage.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendations

Healthcare professionals should suspect child maltreatment when a child has an intra-abdominal or intra-thoracic injury in the absence of an explanation of major accidental trauma or where the history is not consistent with the injury and in one or more of the following circumstances:

- delay in presentation
- absent, implausible, inadequate or inconsistent explanation
- may be in association with other injuries or in isolation, for example there is no external bruising or other injury.

### 4.1.12 Oral injury

Injuries to the oral cavity may involve teeth, gums, tongue, lingual and labial frena, hard and soft palate or oral mucosa. Dental staff are particularly likely to identify these injuries.

#### Overview of available evidence

One systematic review was identified.

### Narrative summary

One well conducted systematic review of the literature identified 19 studies (603 children) that reported oral injuries associated with child maltreatment.[32] Twenty-seven abused children had torn labial frena, of whom 22 were under five years of age. Two children had non-abusive torn labial frena. The review lists a number of oral injuries that were identified in 580 cases of child abuse: laceration or bruising to the lips, mucosal lacerations, dental trauma, tongue injuries and gingival lesions. The authors present no comparative data and conclude that oral cavities should be examined in suspected child abuse. [EL=2+]

### Evidence statement

The systematic review indicates that oral injuries can occur in child abuse but that there are no oral injuries that are specific to maltreatment.

### GDG considerations

The evidence did not show any means of distinguishing accidental oral injury from intentional injury. The GDG believes that as oral injuries may be inflicted and can be missed, all healthcare professionals who are concerned about maltreatment should inspect the child's mouth. The GDG recommends that, as with all injuries seen in child abuse cases, descriptions that are inconsistent with the injury should raise concern about child maltreatment.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

### Recommendations

Healthcare professionals should consider child maltreatment when a child has sustained an injury to the teeth, gums, tongue, frena or oral cavity where the explanation is absent, implausible, inadequate or inconsistent with the developmental level of the child.

## 4.2 Ano-genital symptoms, signs and infections

A disclosure of sexual abuse should lead to a genital examination. The RCPCH Physical Signs of Sexual Abuse[3] recommends that "In the case of suspected sexual abuse, most general paediatricians will not have the expertise to assess or manage the child/young person themselves but will refer to a clinician with more specialised child protection expertise and with training in forensic assessments. Children presenting with concerns about physical abuse, neglect or emotional harm, also require an inspection of the genitalia and anus as part of the full examination" Ano-genital signs may be identified by healthcare professionals in their routine assessment of children for symptoms related to that anatomical area.

### Overview of available evidence

The recent report on the physical signs of child sexual abuse (CSA)[3] was used as the basis for this topic. It was anticipated that this review would include all comparative studies relating to CSA, so a separate search on genital and anal symptoms was not conducted. Two additional case series were identified that looked at genital symptoms of abuse.

### 4.2.1 Genital and anal symptoms

A case series of girls who had disclosed sexual abuse by direct genital contact was identified.[33] Medical charts of 161 girls (median age 10.5, range 3.1-17.8) were reviewed for genital symptoms. The girls had attended a specialist centre for victims of sexual abuse and all had been examined by one physician who used a standard procedure for history taking. Genital symptoms were reported as follows: genital pain or soreness (53%), dysuria (37%) and genital bleeding (11%). The time between abuse-specific examination and last perpetrator contact ranged from less than 24 hours (6%) to more than a year 24%). [EL=3]

Please refer to pp33-4 for definition s of 'consider' and 'suspect' and their associated actions.

Another case series of sexually abused children (n=428, 84% female, mean age 8.6 years, range 1-16) documented genital symptoms and signs at a follow-up visit to a specialist sexual assault centre.[34] Of the total sample, 85 children (20%) had symptoms. These were vaginal pain (n=43), dysuria (n=21), increased urinary frequency (n=20) and recent onset of daytime or night time enuresis (n=24) (see section 7.2.7 wetting and soiling). [EL=3]

See pages 56-58 for 'Delphi consensus', 'GDG considerations' and 'Recommendations'.

### 4.2.2 Genital and anal signs

The systematic reviews undertaken for the RCPCH document were categorised into genital signs of CSA in girls (analysed according to pubertal or pre pubertal status where possible), anal signs of CSA and genital signs of CSA in boys. The topics covered were in girls: genital erythema/redness/inflammation, oedema, genital bruising, genital abrasions, genital lacerations/tears, healing/healed injuries, clefts/notches, hymenal bumps/mounds, size of hymenal orifice, hymenal width, friability, labial fusion, vaginal discharge in prepubertal girls, vaginal foreign bodies; in girls and boys: anal/perianal erythema, perianal venous congestion, anal/perianal bruising, anal fissures, lacerations, scars and tags, reflex and dilatation and general genital injuries in boys. [EL=2++]

A general theme that recurs throughout the document is that the timing of the examination in relation to alleged incidents of abuse affects the ability to observe a sign. The evidence base itself poses problems because there are few comparative studies and few studies where abuse has been rigorously excluded from the comparison groups.

#### Genital signs in girls

**Erythema:** In pre-pubertal girls, genital erythema has been found in sexual abuse cases (7/20) and non-abused controls (2/195) (separate studies). Proportions of sexually abused pubertal girls with erythema ranged from 13% (n=204) to 32% (n=214) in two case series. In one comparison study combining data on pre-pubertal and pubertal girls, erythema was reported in 34% (n=119) of the CSA group, 68% (n=59) of girls with genital complaints and 13% (n=127) of girls undergoing routine examination. Abuse was not rigorously excluded from the comparison groups. The timing of examination after the alleged incident and skin pigmentation influence the finding of erythema.

**Oedema:** No studies were identified that reported the prevalence of oedema in non-abused girls. Oedema was noted in 19% (n=214) of pubertal sexually abused girls. The timing of examination after the alleged incident influences the finding of oedema.

**Bruising:** In one comparative study, bruising was noted in 1/192 girls with a history of vaginal penetration and 0/200 girls who had not been abused. In the abuse cases, examination took place on average 42 days after the abusive event.

In a case series (n=43) of pre-pubertal girls with a history of vaginal penetration, 13 haematomae were found but it was unclear how many girls this involved. No genital bruising was reported in one study of pre-pubertal girls selected for non-abuse.

In a case series (n=204) of pubertal girls with a history of penile vaginal penetration, 4% had bruising.

A case series (n=155) of sexually abused pre-pubertal and pubertal girls examined within 72 hours of abusive event reported 3% with genital bruising.

**Abrasions:** Genital abrasions were reported in one study of healing in sexually abused girls with a history of penile and/or digital vaginal penetration. No genital abrasions were reported in a study of non-abused pre-pubertal girls (n=195). Abrasions were reported in 17% (n=214) of pubertal sexually abused girls. The majority of the cohort reported penile vaginal penetration and had been examined within 72 hours of the incident. In a comparative study of pre-pubertal and pubertal sexually abused girls, 3/119 had abrasions; no abrasions were reported in the genital complaints group (n=59) or the routine health check group (n=127). Abrasions have been reported in one study of pre-pubertal girls with straddle injury. Abuse was not rigorously excluded from this group.

**Lacerations:** There was inconsistency of definitions of genital lacerations and tears to the hymen across the studies identified by the authors. Hymenal lacerations were reported in 33% (n=205) of pre-pubertal sexually abused girls in a case series. The authors reported difficulty in distinguishing small lacerations from notches. Partial hymenal tears were reported in 2/24 girls reporting penile vaginal penetration and 4/19 reporting digital vaginal penetration. In a study of non-abused pre-pubertal girls, no hymenal

lacerations reported. In two studies of pubertal girls, hymenal lacerations/tears were reported in 3% (n=204) and 6% (n=214) were more than 90% of study participants reported penetrative abuse.

Posterior fourchette/fossa tears were reported in 14/24 pre-pubertal sexually abused girls. No genital lacerations were reported in the study of pre-pubertal non-abused girls (n=195). Posterior fourchette/fossa tears were reported in 40% of pubertal sexually abused girls examined less than 72 hours after the incident and in 2% examined more than 72 hours after the incident (n=204). In a study of pre-pubertal and pubertal sexually abused girls, 1/155 had a vaginal laceration (poor definitions used in this study).

**Healing/healed injuries:** Hymenal transection was inconsistently defined in the studies. Hymenal transections have been found in some prepubertal girls with a history of penetrative abuse; none were found in non-abused girls. The evidence on the importance of scars in prepubertal girls is inconclusive.

**Hymenal bumps/mounds:** There was inconsistency of definitions in the identified studies but overall, hymenal bumps/mounds were found to be a normal variant.

**Hymenal width and diameter:** No conclusions could be drawn about the importance of hymenal width or diameter as signs of sexual abuse.

**Friability** of the genital tissues is not specific for sexual abuse in prepubertal girls and there is insufficient literature in pubertal girls.

**Labial fusion** has been found in both abused and non-abused pre-pubertal girls. There is insufficient evidence to determine the importance of labial fusion in sexual abuse of pubertal girls.

**Vaginal discharge** in pre-pubertal girls was observed more often in girls reporting penile vaginal penetration than those reporting digital penetration or no abuse in a case control study where presence of an STI was used to define abuse. Vaginal discharge was found in 1% to 2% of non-abused prepubertal girls.

**Vaginal foreign bodies:** No suitable comparative studies were identified that investigated vaginal foreign bodies. No studies of foreign bodies in pubertal or non-abused girls were identified. In prepubertal girls, three studies representing data on 47 girls (age range 2-10 years) with vaginal foreign bodies. Nine girls were defined as victims of CSA according to differing criteria.

### Anal signs in girls and boys

No comparative studies of suitable quality were identified that reported on anal/perianal erythema, perianal venous congestion, anal/perianal bruising, anal fissures, lacerations, scars and tags or reflex anal dilatation.

**Anal or perianal erythema** was observed in 1% (n=310) to 10% (n=189) of CSA cases. The timing of examination in relation to the incident was not stated. In non-abused children, redness was reported in 7% (n=89) of infants and 11% (n=276) of 5-6 year olds.

**Perianal venous congestion** was observed in 8% (n=50) and 36% (n=50) of anally abused children; the timing of the examination after the incident ranged from four weeks to six years. In non-abused children, perianal venous congestion was reported in 1% of infants (n=89) and 20% of 5-6 year olds (n=276).

**Bruising:** In a case series of anally abused children, bruising was observed in 10% (n=50); the timing of examination after the incident was not reported. In another study, 1% of sexually abused children (n=190) examined within 72 hours had anal/perianal bruising. There were no reports of bruising in non-abused children (n=305).

**Anal lacerations/tears** defined as acute tears in the anus and tissues immediately surrounding it were not found in a study (n=305) where abuse was excluded. Lacerations/tears were found in between 1% and 18% of sexually abused children (based on six case series).

**Anal fissures** were found in one child in a study of non-abused children (n=89). In a study of abused children, 25 of 50 anally abused children had anal fissures, fissures were present in 7% of sexually abused children who denied anal abuse (n=83) and 3% of children with no allegation of sexual abuse (n=81)

**Anal scars** were not found in children selected for non-abuse (n=305). In anally abused children, scars were found in 38% and 84% of children (n=50) in both studies. In sexually abused children anal scars

were found in between 1% and 4%. Anal tags were reported in between 3% and 7% of children selected for non-abuse (two studies) and between 4% and 32% of anally abused children (two studies) where the majority of tags were found away from the midline. In sexually abused children, tags were found in between 3% and 7%.

**Reflex and dilatation:** In children selected for non-abuse reflex anal dilatation has been reported in less than 1% of children examined in the left lateral position and 5% of those examined in the knee-chest position. It was observed in 10% and 34% (two studies, n=50) of anally abused children and 5% of sexually abused children.

**Genital signs in boys**

Genital injuries in boys following sexual abuse have not been well reported. Four case series of sexual abuse in boys have reported injury to the external male genitalia as a result of sexual abuse in between 0% and 7% of abuse cases. Genital injuries due to sexual abuse occur mostly to the penis. Testicular or scrotal injuries are more commonly due to accidents than abuse (based on one study where confirmation of abuse is unclear).

### Evidence statement

The thorough review of the literature on physical signs of sexual abuse highlights important issues for the use of physical signs in suspecting abuse. The evidence base is lacking in both quality and quantity, in part due to difficulties in conducting research in this area. Observable signs are relatively uncommon and this could be because of the timing of the examination relative to the abuse.

### Delphi consensus (see also Appendix C)

The small amount of relevant literature on genital and anal symptoms led the GDG to develop a number of statements for consideration by the Delphi panel. The GDG sought their opinions about genital and anal symptoms in general and asked questions about specific symptoms in order to offer better guidance to healthcare professionals.

**Round 1**

| Statement number | Round 1<br>For the purposes of these statements, medical explanations can include worms, urinary tract infection and nappy rash. | % agreed | n | Outcome |
|---|---|---|---|---|
| 5a | Healthcare professionals should consider sexual abuse when a child has a genital or anal symptom without a medical explanation. | 81 | 88 | Statement accepted |
| 6a | Healthcare professionals should suspect child sexual abuse when a child has a genital or anal symptom that is persistent or repeated without a medical explanation. | 82 | 87 | Statement accepted |
| 7a | Healthcare professionals should consider sexual abuse when a child has genital bleeding without a medical explanation. | 96 | 89 | Statement accepted |
| 8a | Healthcare professionals should suspect sexual abuse when a child has genital bleeding that is persistent or repeated without a medical explanation. | 91 | 88 | Statement accepted |
| 9a | Healthcare professionals should consider sexual abuse when a child has a genital discharge without a medical explanation. | 84 | 89 | Statement accepted |
| 10a | Healthcare professionals should suspect sexual abuse when a child has genital discharge that is persistent or repeated without a medical explanation. | 77 | 87 | Statement accepted |
| 11a | Healthcare professionals should consider sexual abuse when a child has anal bleeding without a medical explanation. | 84 | 89 | Statement accepted |
| 12a | Healthcare professionals should suspect sexual abuse when a child has anal bleeding that is persistent or repeated without a medical explanation. | 81 | 87 | Statement accepted |
| 13a | Healthcare professionals should consider sexual abuse when a child has anal discharge without a medical explanation. | 86 | 88 | Statement accepted |
| 14a | Healthcare professionals should suspect sexual abuse when a child has anal discharge that is persistent or repeated without a medical explanation. | 84 | 85 | Statement accepted |
| 15a | Healthcare professionals should consider sexual abuse when a | 68 | 82 | Statement |

| | | | | |
|---|---|---|---|---|
| | child has dysuria without a medical explanation. | | | amended for round 2. See below. |
| 16a | Healthcare professionals should suspect sexual abuse when a child has dysuria that is persistent or repeated without a medical explanation. | 51 | 79 | Statement amended for round 2. See below. |
| 17a | Healthcare professionals should consider sexual abuse when a child has ano-genital discomfort without a medical explanation. | 70 | 87 | Statement amended for round 2. See below. |
| 18a | Healthcare professionals should suspect sexual abuse when a child has ano-genital discomfort that is persistent or repeated without a medical explanation. | 59 | 85 | Statement amended for round 2. See below. |
| 19a | Healthcare professionals should suspect sexual abuse if genital or anal complaints are associated with behavioural or emotional change. | 88 | 90 | Statement accepted. |
| 20a | Healthcare professionals should suspect sexual abuse if genital or anal complaints are present with other information that suggests the possibility of child sexual abuse. | 98 | 89 | Statement accepted. |

*Statements 5a to 14a*

These statements were agreed in round 1 and incorporated into recommendations.

*Statements 15a to 18a*

Statements on dysuria and ano-genital discomfort were not agreed by sufficient numbers of respondents.

Themes from the comments included:

- confusion about what constitutes a medical explanation and who would be able to provide one
- dysuria not specific to maltreatment

The statements met greater agreement at the 'consider' level so the GDG wrote a new statement that aimed to account for the problems identified by the Delphi panel (statement 15b below)

***Statements 19a and 20a***

These statements were agreed in round 1 and incorporated into recommendations.

**Round 2**

| Statement number | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|
| 15b | Healthcare professionals should consider sexual abuse when a child has discomfort on passing urine (dysuria) or ano-genital discomfort that are persistent or recurrent and is not explained by conditions such as worms, urinary infection, skin conditions, poor hygiene or known allergies. | 78 | 74 | Round 2 statement accepted. |

## GDG considerations

Amongst the number of signs presented in the systematic review, few are commonly observed and, of those, many will only be seen on examination following a disclosure. In the context of this guidance and its intended audience, the GDG believes that the history that the child or parent/carer provides will be of the utmost importance. Therefore the GDG believes that genital or anal symptoms and their context are more likely to become apparent as features of maltreatment in a routine clinical situation than genital or anal signs.

The GDG acknowledges that it is common for newborns to have vaginal discharge and sometimes bleeding, especially if they are breastfed.

There are no studies reporting the prevalence of anal fissures in constipation or the passing of hard stools but the GDG's clinical experience suggests that these, along with Crohn's disease, should be excluded before suspecting anal abuse.

The GDG sought the opinions of the Delphi panel on statements about genital and anal symptoms (see above and section C.2.6). Statements 5a-14a, 19a, 20a and 15b were adopted for use in the recommendations. There was consensus within the GDG about the recommendations on genital and anal signs so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should consider sexual abuse when a girl or boy has discomfort on passing urine (dysuria) or ano-genital discomfort that is persistent or recurrent and is not explained by conditions such as worms, urinary infection, skin conditions, poor hygiene or known allergies.

Healthcare professionals should consider sexual abuse when a girl or boy has a genital or anal symptom such as genital or anal bleeding or genital or anal discharge without a medical explanation.

Healthcare professionals should suspect sexual abuse when a girl or boy has a genital or anal symptom such as genital or anal bleeding or genital or anal discharge without a medical explanation if these complaints are persistent or repeated, are associated with behavioural or emotional change and/or with other information that suggests the possibility of sexual abuse.

Healthcare professionals should suspect child sexual abuse when a girl or boy has a genital injury with an absent, implausible, inadequate or inconsistent explanation for the injury.

Healthcare professionals should suspect sexual abuse when a girl or boy has an anal fissure when constipation, Crohn's disease and passing hard stools have been excluded.

Healthcare professionals should suspect sexual abuse when a girl or boy has an anal or perianal injury (as evidenced by bruising, laceration, swelling, abrasion) with an absent, implausible, inadequate or inconsistent explanation for the injury.

Healthcare professionals should suspect sexual abuse when a girl or boy has a gaping or dilated anus in the absence of medical causes such as neurological disorders or very severe constipation.

Healthcare professionals should consider child sexual abuse if there is evidence of foreign bodies in the vagina or anus, noting that foreign bodies may be indicated by offensive vaginal discharge in girls.

**Research Recommendation**

What are the ano-genital signs, symptoms and presenting features (including emotional and behavioural features) that distinguish sexually abused from non-abused children?

*Why this is important*

A well-conducted prospective study is needed in this area to address problems of reporting bias in the existent literature, particularly in relation to non-abused children.

### 4.2.3 Sexually transmitted infection

In this review we sought to establish whether the most common sexually transmitted infections (STIs) occur more often in children who were sexually abused than in those who were not.

#### Overview of available evidence

A systematic review for physical signs of child sexual abuse[3] builds the evidence base for STIs. The chapter on STIs is treated as one systematic review for the purposes of this document.

#### Narrative summary

In a systematic review of some of the most frequent STIs that have been noted in child sexual abuse cases, 84 studies were reviewed and conclusions were drawn from prevalence figures of a) sexual abuse in children with the STI and b) prevalence figures of the STI in sexually abused children.[3] [EL=2+]

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

None of the literature was able to establish the age at which mother-to-child (vertical) transmission can be excluded.

**Bacterial sexually transmitted infections**

*Neisseria gonorrhoeae* (studies included n=17):

Gonorrhoea is not often seen in sexually abused pre-pubertal and pubertal children. A significant number of children with gonorrhoea who have been evaluated for sexual abuse were found to have been abused. This suggests that sexual contact was the mode of transmission. Sexual abuse is the most likely mode of transmission in pubertal and pre-pubertal children.

*Chlamydia trachomatis* (studies included n=10):

Chlamydia infection is rarely seen in sexually abused children. The majority of children with chlamydia trachomatis who have been evaluated for sexual abuse were found to have been abused. This suggests that sexual contact was the mode of transmission.

Chlamydia is more frequent in pubertal than pre-pubertal sexually abused girls. This result may be biased because of consensual sexual activity or younger children being less likely to disclose abuse.

*Bacterial vaginosis* (studies included n=6):

The authors concluded that there are insufficient data in children to determine the significance of bacterial vaginosis in relation to child sexual abuse.

*Genital mycoplasmas* (studies included n=6):

The available literature does not help to establish whether or not genital mycoplasmas are sexually transmitted in children.

*Syphilis* (studies included n=9):

No literature was identified that distinguished sexually acquired syphilis from congenitally acquired syphilis in children.

**Viral sexually transmitted infections**

*Anogenital warts* (studies included n=10):

A significant proportion of children with anogenital warts have been sexually abused. In six studies sexual transmission was reported to be the cause of infection in 31% to 58% of children with anogenital warts. The evidence does not help to establish the age at which the possibility of mother-to-child transmission during birth can be excluded.

*Oral warts* (studies included n=1):

The authors' conclusion is that there is currently insufficient evidence to determine the significance of oral warts in relation to child sexual abuse.

*Genital herpes simplex* (studies included n=5)

There are very few published studies to inform whether sexual abuse is likely to be the mode of transmission. Where infected children had been evaluated 1/2 and 6/8 were found to have been abused.

*Hepatitis B* (included studies n=4):

There is insufficient evidence to determine the significance of hepatitis B in relation to sexual abuse in children. Despite the lack of evidence, in view of the fact that hepatitis B can be sexually transmitted in adults, sexual abuse should be considered in a child with hepatitis B if vertical, perinatal or blood contamination has been excluded. A positive diagnosis of hepatitis B in the mother does not exclude child sexual abuse.

*Hepatitis C* (included studies n=2):

There is insufficient evidence to determine the significance of hepatitis C in relation to sexual abuse in children.

*Human immunodeficiency virus (HIV)* (studies included n=4):

Published studies suggest that sexual abuse is a likely source of infection in children with HIV in whom the possibility of mother-child transmission or blood contamination has been excluded.

*Trichomonas vaginalis* (studies included n=10):

Published studies suggest that sexual abuse is a likely source of infection in girls. The evidence does not help to establish the age at which the possibility of mother-to-child transmission can be excluded. Consensual sexual activity should be considered.

**Limitations:**

The limitations of the study are discussed in detail by the authors. For STIs the limitations were that the majority of studies came from outside the UK and need to be interpreted in the context of different population prevalence of STIs, health care and child protection systems. The studies included were of variable quality. They often failed to screen all participants for a particular infection and almost no study rigorously explored other methods of transmission in children with confirmed infection.

### Delphi consensus (see also Appendix C)

The GDG sought the opinions of the Delphi panel on the circumstances under which an STI in a young person over 13 years of age is a reason to suspect sexual abuse. They did not seek validation on the list of STIs that should prompt a concern. The following statements were drafted:

**Round 1**

| Statement number | Round 1 | % agreed | n | Outcome |
|---|---|---|---|---|
| 21a | Healthcare professionals should consider sexual abuse when a young person aged 13 to 15 years presents with any sexually transmitted infection unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer. | 93 | 91 | Statement accepted |
| 22a | Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity. | 60 | 91 | See below. |
| 23a | Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity, and when there is a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner. | 91 | 92 | Statement accepted. |
| 24a | Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity, and when there is concern that the young person is being exploited. | 90 | 92 | Statement accepted. |

*Statement 21a*

This statement was agreed in round 1 and incorporated into recommendations.

*Statement 22a*

40% of respondents did not agree with statement 22a as a stand-alone statement

*Statements 23a and 24a*

Over 90% of respondents agreed with these statements about STIs in 16 and 17-year olds. Combining statements 22a, 23a and 24a led to statement 22b in round 2:

**Round 2**

| Statement number | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 22b | Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years of age presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer, and one or more of the following is present:<br>a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner<br>concern that the young person is being exploited | 92 | 79 | Round 2 statement accepted. |

### GDG considerations

It is the GDG's opinion that a sexually transmitted infection in children as a direct result of sexual abuse falls within the legal framework outlined in the sexual offences act. Therefore, a sexually transmitted infection in a child aged under 13 years should raise the suspicion of sexual abuse. The GDG was unable to make specific recommendations about the age at which mother-to-child transmission of infections can be ruled out as the evidence in this area is scarce, but the consensus of opinion was that the probability of vertical transmission decreases as age increases. If vertical transmission is suspected, it is good clinical practice to trace the family member concerned. There is insufficient information about bacterial vaginosis, genital mycoplasma and oral warts in the context of sexual abuse to warrant inclusion in a list of possible STIs due to sexual abuse.

The GDG believes that the issues around consensual experimentation amongst 13-15 year olds outlined in Home Office guidance should be taken into account when a young person of this age presents with a sexually transmitted infection; that guidance indicates that an STI in this age-group is not an immediate reason to suspect sexual abuse.

The GDG believes that to consider sexually transmitted infection in young people aged 16 or 17 years to be a direct result of sexual abuse will depend on the context and nature of the sexual act. Therefore, the presence of an STI in this age group needs to be evaluated in the context of consensual sexual activity.

The GDG sought the opinions of the Delphi panel on recommendations about young people between the ages of 13 and 18 years (see above and section C.2.5). The GDG accepted statements 21a and 22b from the Delphi survey. Although agreement was reached on statement 22b, the GDG amended the definition of a 'discrepancy in power, emotional maturity or mental capacity' to provide examples that are meaningful for healthcare professionals.

### Recommendations

Healthcare professionals should suspect sexual abuse in a child below the age of 13 years who presents with any sexually transmitted infection (such as neisseria gonorrheae, chlamydia trachomatis, syphilis, anogenital warts, genital herpes simplex, hepatitis B and C, HIV and trichomonas vaginalis) unless there is clear evidence of mother-to-child transmission during birth or blood contamination.

Healthcare professionals should consider sexual abuse when a young person aged 13 to 15 years presents with any sexually transmitted infection (such as neisseria gonorrheae, chlamydia trachomatis, syphilis, anogenital warts, genital herpes simplex, hepatitis B and C, HIV and trichomonas vaginalis) unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer.

Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years of age presents with any sexually transmitted infection (such as neisseria gonorrheae, chlamydia trachomatis, syphilis, anogenital warts, genital herpes simplex, hepatitis B and C, HIV and trichomonas vaginalis) when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity and one or more of the following is present:

- a clear discrepancy in power or mental capacity between the young person and their sexual partner, in particular where the relationship constitutes incest or is with those persons in positions of trust, for example teacher, sports coach, minister of religion
- concern that the young person is being exploited or the sexual activity appears not to be consensual.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

### 4.2.4 Pregnancy

Under the Sexual Offences Act 2003, any sexual intercourse with a girl aged under 13 years is unlawful and will be charged as rape. It is illegal for children aged 13-15 years to have sexual intercourse. However, the Home Office will release guidelines instructing that children of these age groups involved in consensual experimentation should not be prosecuted.

The age of consent in the UK is 16 years of age unless there is a proven abuse of trust between a young person and an adult. In this case the age of consent rises to 18 years. This would, for example, apply to residential social workers considering becoming sexually involved with any of the young people with whom they are working, teachers, sports coaches, ministers of religion. This also applies to persons who are not blood related when they live with the family or sometimes take part in family life, for example longstanding lodgers or extended family members. It is also unlawful for 16 to 18 year olds to have sexual intercourse with closely related persons including aunts and uncles, half-siblings, step- and foster parents and also cousins when they live in the same household.

#### Overview of available evidence

No suitable published literature was identified that addressed whether pregnancy is a direct result of child maltreatment. We did not search for epidemiological literature on teenage pregnancy.

#### Delphi consensus (see also Appendix C)

The GDG sought the opinions of the Delphi panel on statements about 16 and 17-year olds because of sensitivities around the age of consent. The following statements were included in the survey.

**Round 1**

| Statement number | Round 1 | % agreed | n | Outcome |
|---|---|---|---|---|
| 25a | Healthcare professionals should consider child maltreatment when a young person aged 16 to 17 years of age is pregnant and there is a clear discrepancy in power, emotional maturity or mental capacity between the young woman and the putative father. | 87 | 92 | Statement accepted. |
| 26a | Healthcare professionals should consider child maltreatment when a young person aged 16 to 17 years of age is pregnant and there is concern that the young person is being exploited. | 90 | 92 | Statement accepted. |
| 27a | Healthcare professionals should consider child maltreatment when a young person aged 16 to 17 years of age is pregnant and the identity of the father is concealed. | 60 | 92 | Statement amended for round 2. See below. |

*Statements 25a and 26a*

These statements were agreed in round 1 and incorporated into recommendations.

*Statement 27a*

The commonest reason for participants not agreeing with the statement 27a about concealed identity of the father was that there are many reasons why pregnant girls may conceal the identity of the father, including shame and fear of familial disapproval. This was addressed in round 2 with the following:

**Round 2**

| Statement number | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|
| 27b | Healthcare professionals should consider child maltreatment as one of the reasons that a young person aged 16 or 17 years of age who is pregnant might conceal the identity of the father. | 66 | 83 | Statement rejected. |

#### GDG considerations

It is the GDG's opinion that pregnancy in children as a direct result of sexual abuse falls within the legal framework outlined in the sexual offences act. Therefore, any pregnancy in a child aged under 13 years

should be recognised to be a result of maltreatment. This still applies if two minors have engaged in sexual intercourse as it represents neglect by lack of supervision.

The GDG believes that the issues around consensual experimentation amongst 13-15 year olds outlined in Home Office guidance should be taken into account when a young person of this age is pregnant; that guidance indicates that a pregnancy in this age-group is not an immediate reason to suspect sexual abuse.

Despite the age of consent being 16 years in the UK, the GDG believes that healthcare professionals may observe circumstances around a pregnancy that should give rise to a suspicion of maltreatment. Namely, there is a clear discrepancy in power, emotional maturity or mental capacity between the young person and the putative father, concern about incest or concern that the young person is being exploited.

The GDG sought the opinions of the Delphi panel on the recommendation about pregnancy in 16 and 17 year olds (see above and section C.2.4). The GDG accepted statements 25a and 26a from the Delphi survey. Although agreement was reached on statement 25a, the GDG amended the definition of a 'discrepancy in power, emotional maturity or mental capacity' to provide examples that are meaningful for healthcare professionals. Based on the views of the Delphi panel, the GDG rejected its proposed statement about a concealed identity of the father. There was consensus within the GDG about the recommendation about children younger than 13 years so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals must recognise that sexual intercourse in a child aged under 13 years is unlawful and therefore pregnancy constitutes maltreatment.

Healthcare professionals should consider sexual abuse when a young person aged 13 to 15 years is pregnant.

Healthcare professionals should consider sexual abuse when a young person aged 16 or 17 years of age, is pregnant and one or more of the following is present:

- a clear discrepancy in power or mental capacity between the young woman and the putative father, in particular where the relationship constitutes incest or is with persons in positions of trust, for example teacher, sports coach, minister of religion, or
- concern that the young person is being exploited or that the sexual activity appears not to have been consensual.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

# 5. Neglect – failure of provision and failure of supervision

## 5.1 General features of neglect

Neglect can be conceptualized as a process involving accumulating risk to the child due to a failure to provide or omission rather than actual incidents of abuse. It is a persistent failure to meet the child's needs that may or may not be wilful. It may be difficult to disentangle the physical privation of material poverty from that of emotional poverty. Professionals may find it difficult to make judgements about vulnerable parents and there is a danger that the parents may become the primary client in an attempt to empower and support them while the risk to the child is accumulating. Thus, decision making in situations of apparent neglect can be very difficult and 'thresholds' hard to establish. There is no diagnostic 'gold standard' for neglect. Yet, it is thought that the effects of neglect on the child can be irreversible.

**Impaired cognitive development**

A longitudinal study was identified that investigated cognitive development in extremely low birth weight infants (n=352, 52 referrals for maltreatment).[35] Cognitive development was assessed at one, two and four years. Of the children referred for maltreatment, 32 were referred before the four-year assessment and of these, 16 were referred before the age of 5.5 months. Twenty-seven children were reported on more than one occasion. At age four, children ((n=269, of which 21 were referred for neglect) were assessed with the General Cognitive Index (CGI) and neglected children were found to score significantly lower than all of the other children in the study (difference of 17.6 points, 95%CI 3.3 to 31.9). [EL=2-]

This study implies that impaired cognitive development is a consequence of neglect in extremely low birth weight infants, although confidence intervals are wide because of the small numbers in the neglect group.

**Failure to thrive**

A cohort of children with failure to thrive (FTT) was identified in Newcastle by population screening and over two years and assessed on various demographic measures (n=94, median age at assessment 15 months).[36] Of the families involved in the study, 21 were involved with social services; four children were registered at being at risk of abuse or neglect.

**Obesity**

The GDG postulated that failure to provide appropriate food may result in obesity. One study was identified that investigated an association between maltreatment and obesity.[37] Children and their mothers (n=2412) were recruited from a birth cohort study; mothers completed the Parent-Child Conflict Tactics Scale (an instrument designed to measure intra-familial conflict) for measurement of maltreatment and child obesity was defined as being above the 95$^{th}$ percentile for BMI on the Centers for Disease Control and Prevention 2000 growth reference at age three years. Eleven per cent of the mothers responded that they had exhibited one of the neglect items in the year prior to assessment. Eighteen per cent of the sample were obese. After controlling for covariates such as birth weight, maternal weight and socioeconomic variables, the odds ratio for obesity associated with neglect was 1.56 (95% CI 1.14 to 2.14). Odds ratios for corporal punishment and psychological aggression were not statistically significant.

**Immunisation**

A comparative case series from the USA was identified that investigated an association between maltreatment and under-immunisation.[38] Immunisation records of children referred to a child advocacy centre were matched with their maltreatment status (confirmed, suspected, ruled out or indeterminate).

Logistic regression controlling for race/ethnicity, medical insurance status and maternal education found a statistically significant association between under-immunisation and confirmed maltreatment (compared to ruled out maltreatment) at 3 months of age (OR=4.0, 95% CI 1.7-9.5) and 7 months of age (OR=4.8, 95% CI 1.5-15.7). Neglected children were not looked at separately. [EL=2-]

**Burns**

A study in a UK burns unit reviewed paediatric (less than 16 years) burns cases.[39] 440 children were identified in a three year period; concern was raised about the circumstances of the burns in 178 of these. After investigation by a family services team, four were found to be inflicted, 133 were accidental and 41 were considered to be due to neglect. For the purposes of analysis, the inflicted injury patients were excluded and comparisons were made between neglect cases and accidental burn patients. The circumstance of the presentation were addressed: there were significantly more neglect cases that presented more than 24 hours after the injury occurred (49% vs. 14%) and first aid was performed in 22% of neglect cases compared to 70% of accidents. 71% of the neglect cases had deep burns compared to 54% of the accidental cases (p=0.49) and 76% of neglect cases required skin grafting compared to 41% of the accidental cases (p<0.0001). There were no significant differences in the age of children, gender, anatomical site of burn, mean body surface area affected and the mechanism of injury. This study is considered in the systematic review cited in section 4.1.4 thermal injuries.[40]

### Delphi consensus (see also Appendix C)

The GDG interpreted the definition of neglect in such a way that would be useful for clinicians. They sought validation on the aspect of "failing to ensure access to appropriate medical care or treatment". The following statements were put into the Delphi survey:

**Round 1**

| Statement number | Round 1 | % agreed | n | Outcome |
|---|---|---|---|---|
| 28a | Healthcare professionals should consider neglect if parents or carers repeatedly fail to seek and adhere to appropriate medical advice for their children. | 91 | 94 | See below for explanation. |
| 29a | These situations can include:<br>persistent failure to have a child immunised | 45 | 92 | See below for explanation. |
| 30a | • persistent failure to attend follow-up outpatient appointments | 70 | 94 | See below for explanation. |
| 31a | • persistent failure to treat a child for dental caries | 83 | 92 | See below for explanation. |
| 32a | • persistent failure to adhere to weight management programs | 54 | 92 | See below for explanation. |
| 33a | • failure to administer essential prescribed medication | 93 | 94 | See below for explanation. |
| 34a | • delay in seeking medical advice. | 80 | 94 | See below for explanation. |

*Statement 29a*

The general theme from the comments was that there are two types of parent who do not have their children immunised. Those who choose not to have their children immunised after being provided with information about immunisation were thought not to be neglectful; parents who do not engage in health promotion were thought to be neglectful.

*Statement 30a*

For non-attendance at follow-up appointments, themes from the comments include:

- it depends on whether the problem has resolved
- it depends why the appointment was made in the first instance.

*Statement 32a*

The statement about weight management was considered too complex an issue to be categorised as neglect.

**Round 2**

In round 2, the GDG chose to separate these items from the umbrella 'consider'. The statements on dental caries (31a), essential medication (33a) and delay in seeking medical advice (34a) were accepted in principle, but were asked about in Round 2 under the 'suspect' category. The statement on attendance at follow-up appointments (30a) was revised in the light of comments and asked about at 'consider' and 'suspect' levels. The issues around weight management were thought be about health promotion and lack of engagement with service provision as a marker of neglect. The GDG therefore drafted a statement to this effect.

| Statement number | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|
| 29b | Healthcare professionals should consider neglect if parents persistently fail to engage with the Child Health Promotion Programme, which includes health and development reviews, screening, immunisation, anticipatory guidance about infant/child behaviour, injury prevention, feeding and dietary advice and prevention of obesity. | 70 | 82 | Statement rejected but included in modified form for consultation. |
| 30b(i) | Healthcare professionals should consider neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being. | 87 | 83 | Accepted at Round 2 |
| 30b(ii) | Healthcare professionals should suspect neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being. | 64 | 83 | Rejected at 'suspect' level (see above) |
| 31b | Healthcare professionals should suspect neglect if parents or carers persistently fail to treat their child's dental caries. | 64 | 83 | Accepted at Round 1 ('consider' level) |
| 33b | Healthcare professionals should suspect neglect if parents or carers fail to administer essential prescribed medication for their child. | 73 | 83 | Accepted at Round 1 ('consider' level) |
| 34b | Healthcare professionals should suspect neglect if parents or carers fail to promptly seek medical advice for their child to the extent that the child's health and well-being is compromised or the child is in ongoing pain. | 89 | 82 | Accepted at Round 2 |

## GDG considerations

Neglect is the commonest reason for being deemed to need a child protection plan in the UK. This is thought to be due to increased recognition in recent years.

While there is a small amount of literature on the specific features with which neglected children present in healthcare settings, the GDG believes that healthcare professionals will encounter children who are neglected. The definition of neglect (see page 35) (Working Together to Safeguard Children 2006[1]) provides a useful starting point and the GDG has chosen to translate it into clinically useful recommendations based broadly on clinical experience.

It may be difficult to distinguish between neglect and material poverty but failure to provide is integral to neglect as outlined in the Working Together definition of neglect.

The GDG believes that a poor standard of hygiene (appearance, infestations) such that a child's health may be affected, inadequate provision of food and living space that is inappropriate or unsafe (including persistently poor hygiene) for the child's developmental stage represent examples of failure to meet a child's basic physical needs.

The GDG believes that a failure to ensure adequate supervision can result in injuries and that this can become apparent when the explanation for the injury is given.

The GDG sought the opinions of the Delphi panel on the asterisked recommendations (see also section C.2.7). The GDG accepted statements 28a, 30b(i), 31a, 33a and 34b from the Delphi survey. The recommendation about engagement in preventive child health promotion programmes is a modified version of a statement agreed on by 70% of survey participants (29b). The modifications were made by GDG consensus based on comments from the survey participants.

There was consensus within the GDG about the remaining recommendations in this section so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should consider neglect if a child's state of clothing or footwear is consistently inappropriate, for example, for the weather or the child's size.

Healthcare professionals should suspect neglect if a child is persistently smelly and dirty.

Healthcare professionals should suspect neglect if a child has persistent infestations, such as scabies or head lice, where no attempt has been made to treat them.

Healthcare professionals should consider neglect if a child displays faltering growth (failure to thrive) due to lack of provision of an adequate or appropriate diet.

*Healthcare professionals should consider neglect if parents persistently fail to engage with current preventive child health promotion programmes, for example health and development reviews, screening and considering advice about immunisation, feeding, diet, exercise and injury prevention.

*Healthcare professionals should suspect neglect if parents or carers fail to promptly seek medical advice for their child to the extent that the child's health and well-being is compromised or the child is in ongoing pain.

*Healthcare professionals should consider neglect if parents or carers fail to administer essential prescribed medication for their child.

*Healthcare professionals should consider neglect if parents or carers persistently fail to obtain treatment for their child's dental caries.

*Healthcare professionals should consider neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being.

Healthcare professionals should consider neglect when the explanation for the injury, including a burn, suggests lack of appropriate supervision.

Healthcare professionals should consider neglect if a child is not being cared for by a person who is able to provide safe or adequate care, including ensuring regular school attendance at compulsory school age.

Healthcare professionals should be aware that abandonment constitutes neglect.

Healthcare professionals should suspect neglect if they encounter the following persistent home conditions: poor standard of hygiene such that a child's health may be affected, inadequate provision of food, living space that is inappropriate or unsafe for the child's developmental stage.

## 5.2 Over- and under-nutrition

Under-nutrition, due to inadequate calories and other nutrients, and over nutrition leading to obesity can have adverse short and long term health consequences for children. Both are usually defined through centile growth charts either by plotting height, weight and head circumference or by calculating and plotting body mass index (BMI). In under-nutrition, weight is affected before height. There is no clear cut off centile for under nutrition; although weight below the 2nd centile suggests under-nutrition, some congenital medical conditions or genetic factors can cause this and an assessment of the child as a whole is necessary. A child is obese when their weight is on a centile well above their height centile, although over-nutrition also causes acceleration in height. Obesity in children is defined as those with a BMI on or above the 98th centile of the UK 1990 reference chart for age and sex.

### Overview of available evidence

A total of 1072 articles were identified and 67 articles were selected for detailed assessment. Five articles were included in the final review. A detailed description of each study is provided below.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

### Narrative summary

A cohort study (n = 260) undertaken in the UK compared the growth patterns of maltreated children (diagnosis based on case conference and social services intervention) based on remaining at home or entering foster care. The study found that of the 260 children 39 had height greater than two standard deviations (SD) below mean for the cohort, and 21 had weight greater than two SD below mean for cohort. The study reported that 10 of 11 children in foster care compared to four of 28 children who remained at home showed 0.5 SD increase in height (p = 0.001). However, eight of 16 who remained at home compared to four of four who were in foster care showed a 0.5 SD increase in weight (ns)[41] [EL = 3]

A case-control study (n = 196) undertaken in the USA compared the growth patterns of children who had been maltreated (n = 53 – 64.2% female, 86.5% non-Caucasian, 84% less than five years old) or not (n = 143 – 51% female, 59.3% non-Caucasian, 87% less than five years old). The study reported low weight for height in 16.35% of abused and 0.7% of non-maltreated (OR 16.6, 95% CI 1.9 to 145.0, p < 0.05). The study found a low height-for-age in 11.6% of abused and 5.6% of non-maltreated (OR = 2.2, 95% CI 0.61 to 7.9). All the figures were adjusted for age, sex, and ethnicity. The study concluded that malnutrition was found more amongst abused children than amongst non-abused.[42] 1989 [EL = 2+]

A cohort study (n = 2412) undertaken in the USA assessed the association between obesity (BMI above 95$^{th}$ centile on the USA standard reference charts 2000) and maltreatment (based on parent-child conflict tactics scale – neglect, physical punishment, psychological aggression) in children (aged three years, 48.2% female, 19.4% Caucasian). The study found that 23.6% of neglected children were obese compared to 17.5% of children who were not neglected (OR = 1.56, 95% CI 1.14 to 2.14, adjusted for maternal BMI and other covariates). For physical punishment the study found that 19.8% of children whose parents reported zero to two incidences per year were obese, 19.8% for those that reported two to six, 18.4% for those that reported seven to 14, 15% for those that reported 15 to 30, 17.8% for those that reported 31 to 104 (OR = 0.94, 95% CI 0.72 to 1.24). For psychological aggression the study found that 19.7% of children whose parents reported zero to five incidences per year were obese, 18% for those that reported six to 16, 17.5% for those that reported seven to 29, 17.4% for those that reported 30 to 49, 18% for those that reported 50 to 125 (OR = 0.90 to 1.18). The study concluded that neglect was associated with obesity.[37] [EL = 3]

A case-control study (n = 173) undertaken in the USA examined the link between childhood sexual abuse (based on child protection services, n = 84, 39% minority) or not (n = 89, 51% minority) and obesity (BMI above 95$^{th}$ centile on the USA standard reference charts 2000) from childhood to adulthood in females. The study found that as children (aged six to 14) 25.42% of abused compared to 21.88% of non-abused were obese (OR = 1.25, 95% CI -0.05 to 3.00, p = 0.52). As adolescents (aged 15 to 19) the figures were 27.87% vs. 15.49% (OR 2.03, 95% CI 0.54 to 4.60, p = 0.09).[43] [EL = 2+]

A community-based prospective cohort study (n = 782 mothers and off-spring) undertaken in the USA examined link between childhood adversity (abuse based on referral to child protection services) and weight problems during adolescence and early adulthood. Children were interviewed three times over a ten year period. The study was 91% white and 385 of 782 were female. In addition to maltreatment, the study examined a number of factors, such as parenting style, psychiatric problems and socio-economic variables. The study found that five of 24 who reported neglect were obese compared to 36 of 711 who did not report neglect (OR = 4.66, 95%CI 1.65 to 13.16). The figures for recurrent weight change and physical abuse were ten of 24 compared to 117 of 711 (OR = 3.63, 95% CI 1.58 to 8.36). For recurrent weight change and sexual abuse the figures were nine of 22 compared to 120 of 644 (OR = 3.02, 95% CI 1.26 to 7.24). The figures for strict dieting and physical abuse were nine of 24 compared to 120 of 711 (OR = 2.96, 95% CI 1.26 to 6.91). The study also undertook sub-group analysis on females. For females the study found that low body weight and physical abuse four of 24 compared to 13 of 319 (OR = 4.71, 95% CI 1.41 to 15.76). The figures for obesity and physical neglect were three of 14 compared to 14 of 356 (OR = 6.66, 95% CI 1.67 to 26.59). The study reported that parental relationship factors were the most significant for eating disorders and weight problems.[44] [EL = 2+]

### Evidence statement

A total of five studies were reviewed. Meta-analysis was not possible due to heterogeneity between study types. One study found significant ‘catch up’ height gain (p = 0.001), but not weight gain (ns) in children who were moved into foster care compared to those who remained at home. A second study found low weight-for-height in abused compared to non-maltreated (OR 16.6, 95% CI 1.9 to 145.0), but

not low height-for-age. A third study found that neglected children were more likely to be obese than those who were not neglected (OR = 1.56, 95% CI 1.14 to 2.14). No association was found for physical abuse or psychological aggression. A fourth study found no relationship between abuse and obesity (OR = 1.25, 95% CI -0.05 to 3.00). A fifth study found links between neglect and obesity (OR = 4.66, 95% CI 1.65 to 13.16), recurrent weight change and physical abuse (OR = 3.63, 1.58 to 8.36) and sexual abuse (OR = 3.02, 95% CI 1.26 to 7.24), strict dieting and physical abuse (OR = 2.96, 95% CI 1.26 to 6.91). For females the study found links between low body weight and physical abuse (OR = 4.71, 95% CI 1.41 to 15.76), and obesity and physical neglect (OR = 6.66, 95% CI 1.67 to 26.59).

In addition, maltreatment is usually found in association with a set of other personal, familial and wider social problems. Therefore, the casual pathway of any statistical association may not be direct.

### GDG considerations

While the evidence on associations between maltreatment and over- and under-nutrition is unclear, the GDG believes that a growth trajectory that differs from normal should prompt queries about child maltreatment when no suitable medical explanation is available. However, it must be recognised that there can be an overlap between child protection issues, feeding difficulties and medical explanation.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

### Recommendation

Healthcare professionals should consider child maltreatment in any child with abnormal growth patterns for which there is no medical cause.

## 5.3 Oral health

Oral health is, according to the World Health Organisation, "a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss, and other diseases and disorders that affect the oral cavity."[45]

Poor oral health can present as untreated dental caries, gum disease, mouth ulcers or teeth that appear dirty and uncared for. All of these conditions may cause discomfort and distress. Untreated dental caries in a child may indicate failure by parents to seek medical attention and therefore an aspect of neglect. However, it should be remembered that dental caries is a multifactorial disease associated with poor oral hygiene, and diet. Lack of access to healthcare or poor management by dentist, parental education and socioeconomic barriers also need to be considered.

### Overview of available evidence

Two case-control studies and a case series were identified.

### Narrative summary

Two case-control studies from the same research group in the USA compared the oral health of children who had been abused or neglected and those who had not.[46;47] In both studies, confirmed abuse cases were drawn from the social services register of a major military medical centre and the controls were recruited from a general oral survey of children at the same military base. Controls were matched to cases on age, parental education and parent/carer's military rank. Outcome measures were presence of any dental caries in the child's lifetime and presence of untreated decay. The first study investigated the relationship between abuse and oral hygiene in the primary dentition.[46] There were 42 cases (age range three – 11 years) and 822 controls. There was no relationship reported between abuse/neglect and ever having had dental caries but the relationship between abuse/neglect and untreated dental caries depended on the type of unit the parent/carer was assigned to.

The second study investigated the permanent dentition.[47] There were 30 cases of child maltreatment and 873 controls (age range five – 13 years). There was no significant difference between abused/neglected

Please refer to p34 for the definition of 'consider' and its associated actions.

children and controls in the presence of lifetime caries (treated or untreated) in children's permanent teeth (OR 2.20 (95% CI 0.90, 5.42)). It was found to be more likely that children had untreated dental caries if they had been abused/neglected than if they had not been abused or neglected (OR 8.00 (95% CI 3.90, 17.7)). Both studies were conducted well but the results are not applicable to a general UK population. [EL=2+]

Dental records of a group of children (n=66, mean age 4.1 years) under the care of the Children's Aid Society of Toronto were reviewed in a study which compared data on abused/neglected children with population figures.[48] Oral health was measured using the dmft (decayed, missing or filled teeth) index. No children had received dental treatment when they first came into contact with the dental service of the Aid Society. Population figures came from a study of five-year olds (n=3185) in the city of Toronto. 56% of the study sample had early childhood caries compared to 30% of the population and the mean dmft index was 3.78 (SE 0.73) in four to six year olds in the study sample and 0.42 (SE 0.02) in the population. [EL=3]

### Evidence statement

The available evidence shows no certainty about the relationship between poor oral health and child maltreatment.

### GDG considerations

The GDG believes that failure on the part of a parent or carer to seek or implement dental care such that a child's teeth and oral cavity are in visibly poor health is a reason to consider neglect. The GDG also believes that untreated severe dental caries can represent neglect.. See section 5.3 neglect-failure of provision and failure of supervision for recommendation on oral health.

# 6. Clinical presentations

## 6.1 Repeated attendance at medical services

There are a number of reasons why maltreated children are thought to attend frequently at healthcare services. The first is that overt physical injuries, either inflicted or due to inadequate supervision, are likely to need treatment and maltreatment is unlikely to be an isolated incident. Secondly, children in whom illness has been fabricated or induced are likely to be presented frequently to health services.

### Overview of available evidence

A systematic review and a comparative study were identified that considered repeated healthcare use as a sign of maltreatment.

### Narrative summary

A systematic review that searched for studies that reported repeat attendances at accident and emergency departments (A&E) for injury in physically abused and non-abused injured children attending A&E found no relevant studies.[4] Three studies were identified but excluded because of the way in which abused children were identified. Using a dataset on injured children admitted for suspected physical abuse and a separate dataset on re-attendance at hospital for injuries regardless of abuse status (both from the UK), estimates of re-attendance were calculated. Of 108 children attending A&E with an injury due to suspected abuse, 22 re-attended at least once with an injury. In a database of injured children regardless of abuse status, between 20% and 49% of pre-school injured children re-attended A&E with an injury within 12 months of the initial visit; 13% to 21% had at least three injury-related visits in a year. [EL=2+]

A longitudinal study from the USA was identified that aimed to determine whether injury-related emergency department (ED) visits among children aged zero to four years were associated with child maltreatment reports.[49] During one calendar year, there were 56,364 injury visits by 50,068 children. Sexual assault cases were excluded from the study. The relative risk of having a substantiated report of physical abuse or neglect was 2.5 (95% CI 2.1 to 2.9) when children attended for two different injuries compared to one. For children with three injuries, the relative risk was 2.3 (95% CI 1.5 to 3.6) and for children with four or more injuries, the relative risk was 4.7 (95% CI 2.4 to 9.2). [EL=2+]

### Evidence statement

According to the systematic review, there is no UK based published study that addressed the rate of previous attendance at accident and emergency departments for injury in physically abused children in comparison to non-abused children. A recent US longitudinal data linkage study found a strong link between repeated attendance and substantiated maltreatment suggesting that there is an increased tendency for children who have been maltreated to have sought medical opinion more often than non-abused children. Indirect data from the UK suggest that it is not uncommon for pre-school children to re-attend at A&E in a 12-month period irrespective of abuse status.

### Delphi consensus (see also Appendix C)

The GDG sought the opinions of the Delphi panel on this topic. The following statements were drafted:

| Statement number | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|
| 35a | Healthcare professionals should consider child maltreatment when they become aware of an unusual pattern of presentation to, and contact with, healthcare providers. | 76 | 84 | Statement accepted |
| 36a | Healthcare professionals should consider child maltreatment when they become aware of frequent presentations or reports of | 92 | 84 | Statement accepted |

| | | | | |
|---|---|---|---|---|
| | injuries. | | | |

### GDG considerations

Several studies of children who have sustained abusive fractures, thermal injury, NAHI and sexual abuse (see sections 4.1.7 fractures, 4.1.4 thermal injuries 4.1.8 intra-cranial injuries and 4.2 ano-genital signs, symptoms and infections) suggest that these maltreatments are repeated or ongoing. It is therefore likely that frequent presentation with injury is suggestive of child abuse.

The GDG considered that data from other countries could not be extrapolated directly to the UK population of children and young people. This is based on the fact that non-UK based studies were conducted in health service settings with configurations and support infrastructures different to those found in the NHS. However, the relevant data were discussed by the GDG and used to inform their consensus based recommendation.

The GDG believes that there are many innocent reasons why children may re-attend, so frequent re-attendance should not prompt an immediate suspicion of maltreatment without an examination of the circumstances.

The GDG sought the opinions of the Delphi panel on this recommendation and sufficient agreement was reached (see above and section C.2.9).

### Recommendation

Healthcare professionals should consider[1] child maltreatment when they become aware of:

- an unusual pattern of presentation to, and contact with, healthcare providers, or
- frequent presentations or reports of injuries.

## 6.2 Dehydration

No suitable published literature was identified about dehydration in child maltreatment. The GDG chose not to pursue this topic as it is a complex problem in normal clinical practice. Dehydration can occur as a result of poisoning (see section 6.5).

## 6.3 Strangulation and suffocation

Strangulation and suffocation are rare forms of injury in children and may be fatal. Office of National statistics figures estimate that around 15-20 children die of suffocation and 20-30 children die of strangulation or hanging in a year. Recognition of a child where there has been attempted strangulation may include bruises or ligature marks around the neck. These children and those who have been suffocated may have petechiae of the face, head and neck and may have breathing difficulties. (See also sections 6.4 apparent life-threatening events and 4.1.2 bruises.)

Babies who have suffocated may have been overlain or have slipped down the side of the bed where they become smothered in bed clothes. Strangulation has been reported where infants become stuck in blind cords often placed too close to the cot. Older children may suffer strangulation or hang themselves from self injurious, suicidal behaviour or in play activities that have tragic consequences. National statistics suggest that just under ten percent of children who die from choking, suffocation or strangulation have been deliberately harmed. Repeated attempted suffocation has been recognised as a form of fabricated or induced illness (see section 6.7).

### Overview of available evidence

A systematic review of nasal bleeding in deliberate suffocation was identified. Studies that were found in the literature search often reported post-mortem findings; this is beyond the scope of the guidance.

[1] Please refer to p35 for the definition of 'consider' and its associated actions.

### Narrative summary

A systematic review of associations betweens nasal bleeding and deliberate suffocation in infants identified six studies that reported on facial bleeding, of which it appears that four are of children who were dead on presentation.[50] A case control study of apparent life-threatening event (ALTE) found nine deliberate suffocation patients with nasal bleeding (n=.30) and no children with nasal bleeding in the group suffering ALTE from medical causes (n=46). A case series of children with recurrent ALTE reported 12 of 138 children with facial bleeding. [EL=2+]

### GDG considerations

In the absence of a body of evidence, the GDG recognises that strangulation and suffocation are serious injuries. Any clinical signs of suffocation or strangulation should be a cause for serious concern regarding child maltreatment (see also section 5.1 general features of neglect and 7.2.1 self-harm). The systematic review of nosebleeds in infants shows that nosebleeds can occur in cases of deliberate suffocation. The GDG believes that a nosebleed in an infant in conjunction with an ALTE should prompt investigations into the cause of these events. See section 6.4 (apparent life-threatening event) for the recommendation on nose bleeds.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

### Recommendation

Healthcare professionals should suspect[*] child maltreatment if a child shows signs of strangulation, for example bruising around the neck or ligature marks with or without facial petechiae, in the absence of a plausible, adequate or consistent explanation.

## 6.4 Apparent life-threatening event

The term Apparent Life Threatening Events (ALTE) was introduced in 1986 by the National Institutes of Health Consensus Development Conference on Infantile Apnea and Home Monitoring.[51] The term ALTE was introduced to replace other terms, such as "near-miss SIDS" or "aborted cot death" that misled people into thinking that there was a direct association between these symptoms and sudden infant death syndrome (SIDS). The consensus conference defined ALTE as being a combination of the following symptoms:

- Apnoea — usually no respiratory effort (central) or sometimes effort with difficulty (obstructive)
- Colour change — usually cyanotic or pallid, but occasionally erythematous or plethoric (red)
- Marked change in muscle tone (usually limpness or rarely rigidity)
- Choking or gagging.

This review examines the evidence linking ALTEs with maltreatment.

### Narrative summary

A total of 201 (194 from main search and seven from bibliographies) articles were identified and 60 articles were selected for detailed assessment. Of these, one systematic review and 11 additional studies have been included in the review.

One systematic review (n = 8 papers; search undertaken in 2002) assessed the initial diagnosis given when infants presented with an ALTE. The review included eight studies involving 643 infants seen in emergency departments or paediatric units. The study calculated that 0.6% to 0.8% of emergency admissions for infants were for ALTE. A total of 728 diagnoses covering 50 conditions were reported, of these: 227 were gastro-oesophageal reflux disease (GORD), 169 were unknown, 83 were seizures, 58 were lower respiratory tract infection (LRTI), 26 were ears, nose and throat (ENT) problems, 17 were breath holding, 11 were metabolic disease, 11 were ingestion of toxins or drugs, six were cardiac

[*] Please refer to pp33-34 for the definition of ‘suspect’ and its associated actions.

problems, eight were urinary tract infection (UTIs), five were benign cause, and two were fabricated illness (0.3% of children). The study concluded that careful investigation of ALTE is needed because of many possible causes.[52] [EL = 2+]

A prospective cohort study (n = 44184) undertaken in Austria investigated the epidemiology of ALTE. The study identified 164 cases of ALTE or 2.46 per 1000 live births. An underlying cause was identified in 91 of 164 cases (55%) and of these 29% were respiratory, 22% were digestive (gastro-intestinal) tract, 2% were congenital cardiac malformation, 1% were inborn metabolic errors and 1% were convulsions. The study made no conclusions in relation to child maltreatment.[53] [EL = 3]

A prospective cohort study (n = 340) undertaken in Australia examined the diagnosis of ALTEs: 289 of 340 had a diagnosis of which 211 were GORD, 17 airway pathology, 25 fits/seizures, two brain-stem tumours, two hypoglycaemia, eight respiratory syncytial virus, five fabricated or induced illness (1.7% of those diagnosed, 1.5% of total) and 27 abnormal pneumograms (11 with reflux). Fifty-one had no abnormal finding. The study made no conclusions in relation to child maltreatment. [EL = 3][54]

A prospective case-series (n = 128) from the USA of children aged under 24 months presenting at a single emergency department examined the diagnosis applied to cases of ALTE. Of the 128 cases of ALTE: 51 were GORD, 38 were apnoea, 11 were choking episode, six were infection, five were bronchiolitis, five were upper respiratory infection, four were seizures, three were abuse (2.3% of total), three were swallowing disorder and two breathing spell. The study concluded that abuse was diagnosed in 2.3% of cases of ALTE and this should be considered in patients who present with ALTE. [EL = 3][55]

A prospective case-series (n = 157) from the UK of children (aged one week to 96 months) presenting once or more in one hospital setting examined the diagnosis applied to cases of ALTE. The study reported that of the 157 reported cases: 80 had no diagnosis. Of those diagnosed two had disturbances in skin perfusion, seven had fabricated illness (9% of those diagnosed and 4% of total), 18 had suffered suffocation (23% of those diagnosed and 11.5% of total), 40 had hypoxaemia, and ten had hypoxaemia induced by epilepsy. The study concluded that identification of mechanisms is essential to the appropriate management of infants with apparent life threatening events. [EL = 3][56]

A prospective case-series (n = 243) of infants aged under 12 months admitted to one tertiary unit in the USA examined the diagnosis given to cases of ALTE. The study found that a total 35 diagnoses were made: 80 were infection, 69 were gastrointestinal, 32 were neurological including six (2.5% of total) abusive head injuries within this group), seven were airway obstruction, six were congenital or birth related problems, 39 were unknown, six were normal or benign. The study concluded that a wide spectrum of diseases and disorders can precipitate an ALTE. In relation to maltreatment the study concluded that "Among them, abusive head injury, a recently recognized cause, occurs frequently enough to obligate its inclusion in the differential diagnosis." [EL = 3] 2003[57]

A retrospective case-series (n = 60) from the USA examined the diagnosis applied to infants with ALTE. The study setting was a single emergency medical service (EMS) over a 12 month period. The study found that 60 (7.5%) out of 804 infants encountered met criteria for ALTE (absence of breath, colour change, change in muscle tone). The diagnosis applied to these cases were: 20 (33%) had no diagnosis, seven (12%) were pneumonia or bronchiolitis, six (10%) were GORD, five (8%) were seizures, four (7%) were sepsis, four (7%) were upper respiratory infection, three (5%) were apnoea episodes, two (3%) were intracranial haemorrhage, two (3%) left against advice, one (2%) was bacterial meningitis, one (2%) was dehydration and one (2%) was severe anaemia. Furthermore, 35% of the 60 infants had been diagnosed with underlying conditions. The study reported one case of intracranial injury caused by maltreatment, but highlighted that in 20 cases no diagnosis was made and in two cases the parents left against medical advice. The study concluded that "An apparent life-threatening event in an infant can present without signs of acute illness and is commonly encountered in the EMS setting. It is often associated with significant medical conditions, and EMS personnel should be aware of the clinical importance of an apparent life-threatening event. Infants meeting criteria for an apparent life-threatening event should receive a timely and thorough medical evaluation". [EL = 3][58]

A retrospective case-series (n = 73) of infants (mean age 7.4 weeks) who were seen at a single apnoea program in the USA reported that 47 infants had negative investigation, 17 had recurrent events but no diagnosis, five had respiratory infection, two had GORD, one had pallid syncope and one had tracheal stenosis. [EL = 3][59]

A retrospective partially controlled case-study (n = 85) from the UK compared the medical and family history of maltreated children (30 of 39 children with maltreatment confirmed by covert videoing) and non-maltreated children (46 children with confirmed respiratory disease or epilepsy) presenting with

ALTE. The mean age of maltreated children when they first presented with ALTE was 3.6 months. The study found that in the 41 siblings of the maltreatment group there were 12 unexpected deaths compared to one unexpected death amongst the 52 siblings of the control group ($p< 0.0001$). [EL = 2-][60]

A survey of 11 apnoea monitoring programs and four apnoea monitoring device vendors in the USA examined reports of infant deaths. Over a five-year period 1841 children were monitored. There were 25 reported deaths in this group: 13 due to SIDS, four due to non-accidental trauma (0.2% of total), six due to sudden unexpected death at home, one due to subarachnoid haemorrhage and one caused by cardiac disease. The study reported no specific conclusions relating to maltreatment. [EL = 3][61]

A survey of 51 of 127 (n = 20090) apnoea monitoring programs in the USA investigated the prevalence of fabricated and induced illness. The results showed that 54 (0.25% of total) cases of fabricated or induced illness were reported. The average age of infants with this diagnosis was 8.2 weeks. Detailed information on 32 of these cases showed that 18 were re-hospitalised between one and four times, 13 were re-hospitalised five or more times and one was unknown. The study concluded that fabricated or induced illness presents as unexplained multiple, serious apnoea events occurring in the presence of only one person (not witnessed). [EL = 3] (40767)

### Evidence statement

Evidence from one systematic review, six prospective case-series, three retrospective case series and two surveys were included in the review. The evidence shows that ALTEs account for 0.246 % to 0.8% of emergency hospital attendances. Studies showed that infections, gastrointestinal problems, seizures and 'unknown' cause were the most common diagnosis applied, accounting for 545 of 728 diagnosis in the systematic review. The evidence shows that maltreatment is diagnosed in 0% to 15.5% of cases, but these figures were dependent on the aim of study, date of study, patient population, and the investigations undertaken. One survey of apnoea monitoring programmes showed that 18 of 32 (56%) of infants who were subject to fabricated or induced illness were readmitted to hospital on multiple occasions.

### GDG considerations

There are many causes of ALTEs and the literature suggests that an ALTE due to maltreatment is rare. However, the high number of children with unknown diagnosis represents a potentially hidden population of maltreated children. The GDG found no clear evidence on the significance of multiple ALTE presentations in an individual child. Drawing on their collective clinical experience, the GDG believes that multiple ALTE presentations in the absence of a medical cause indicates a reason to be increasingly concerned about maltreatment.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

### Recommendation

Healthcare professionals should suspect child maltreatment with repeated presentations of an apparent life-threatening event where the onset is witnessed only by the carer and where underlying medical causes have not been identified.

Healthcare professionals should consider child maltreatment if an infant has an apparent life-threatening event with bleeding from the nose or mouth where underlying medical causes have not been identified.

## 6.5 Poisoning

Intentional poisoning is an unusual manifestation of child abuse which is difficult to diagnose because of the variation in presenting signs and symptoms.[62] In this review we sought to identify features of or indicators for intentional poisoning by establishing how intentional poisoning differs from accidental poisoning.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

### Overview of available evidence

No relevant evidence that fulfilled the inclusion criteria was identified.

### GDG considerations

The GDG's opinion is that the clinical signs and symptoms of poisoning do not differ between accidental and intentional poisoning and therefore concluded that it is of utmost importance to identify indicators relating to the circumstances and context of the poisoning incident.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

### Recommendations

Healthcare professionals should suspect child maltreatment, either neglect or inflicted harm, in cases of poisoning in children when:

- there is a report of inappropriate administration of substances, including prescribed and non-prescribed drugs
- there are unexpected blood levels of non-prescribed medication
- there is reported or biochemical evidence of ingestions of more than one toxic substance
- there is any case of poisoning in babies or children who would be unable to access the substance independently
- a child presents with poisoning and there is an absent, implausible, inadequate or inconsistent explanation for the poisoning or how the substance came to be in the child
- there have been repeated presentations of ingestions in the index child or other children in the household.

Healthcare professionals should consider child maltreatment in cases of hypernatraemic dehydration, which may arise from, for example, over-concentrated preparations of formula feeds as well as from deliberate salt poisoning.

## 6.6 Near drowning

Children occasionally present to medical services after they have experienced a submersion event which is potentially fatal. If they survive the submersion event, the case is labelled a near drowning event. Children can be left disabled due to brain asphyxia after a near drowning event. Such episodes are not trivial. A child can nearly drown in any amount of water. The youngest children are at risk from buckets of water, water in the domestic bath and garden ponds. Older children who have a greater degree of independence can drown or nearly drown in rivers, canals or unsupervised swimming pools.

When assessing whether a near drowning case could have arisen from child maltreatment, consideration needs to be given to whether levels of adult supervision were appropriate for the age and developmental level of the child or whether there are any indications that the submersion was deliberate.

### Overview of available evidence

One case series was identified.

### Narrative summary

A case series[63] (n=205, aged less than 19 years) sought to improve the understanding and recognition of inflicted paediatric submersion in children who sustained submersion injury and were hospitalised or autopsied. [EL=3] All events were categorised as either having been inflicted or unintentional through a review of abstracted case scenarios by two paediatricians using pre-established criteria. Sixteen submersions were judged to have been inflicted and 186 as having been unintentional. Two cases have

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

been confirmed as having been intentional submersions. In the inflicted submersion group all children were younger than five years.

Comparing these two groups it was found that submersions were four times more likely to occur in bathtubs than in other sites (RR 4.14; 95% CI 2.35 to 7.29 according to our own calculations from published data; the given RR was 6.28; 95% CI 2.51 to 15.69) The data published showed that 9 out of 16 bathtub submersions were inflicted and 25 out of 184 were unintentional.

There were no differences found between inflicted and unintentional submersions in the duration of submersion. In general the numbers in the inflicted group are very small and therefore differences between the groups are difficult to verify. Only two cases were confirmed as being inflicted. The authors conclude that unexplained physical injuries, developmental implausibility or changing history are the main features for the recognition of inflicted submersion.

#### Evidence statement

One study suggests that it is difficult to distinguish inflicted from unintentional submersions.

#### GDG considerations

The GDG believes that a near-drowning incident due to maltreatment can be caused by deliberate immersion or can occur as a result of lack of supervision. The account of the incident is key in determining the probability that maltreatment has occurred and suspicion should be raised when the account is inconsistent with the injuries. A drowning incident could also give reason to suspect maltreatment but unexpected child deaths are addressed by processes that are beyond the scope of this guidance.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendation

Healthcare professionals should suspect[1] child maltreatment when a near-drowning incident has an absent, implausible, inadequate, inconsistent explanation or when the child's presentation is inconsistent with the account. Child maltreatment should also be considered when the incident suggests a lack of supervision (see section 5.1 general features of neglect).

## 6.7 Fabricated or induced illness

Fabricated or induced illness (FII) has had a number of names and a number of definitions. It is considered a form of physical abuse under the Working Together definition (see section 3.2 definitions of child maltreatment). Munchausen syndrome by proxy (MSBP) and factitious disorder by proxy are also referred to in the literature under this sub-heading. Fabricated or induced illnesses are difficult to identify because the fabrications, usually by a parent, are usually denied, often intricate and believable. This form of maltreatment can cause children to undergo unnecessary investigations and treatments, including surgery. Many of the illnesses that are fabricated or induced present as common childhood problems; many of the children also suffer from genuine or naturally-caused conditions, which complicate diagnosis further. There are separate reviews on ALTE (see section 6.4), poisoning (see section 6.5) and suffocation (see section 6.3).

#### Overview of available evidence

A number of systematic reviews were identified that brought together case reports of MSBP.

#### Narrative summary

A systematic review was identified that synthesised data on 451 cases of MSBP found in the literature between 1972 and 1999.[64] This review was an update of a paper published in 1987 that included 117 cases.[65] The average age at diagnosis was 48.6 months (range 0 -204 months) (n=404) and 52% of cases

[1] Please refer to pp33-34 for the definition of 'suspect' and its associated actions.

were male. The estimated time between onset and diagnosis was 21.8 months, range (0-195 months) (n=201). In 78.5% of cases, the perpetrator was the mother and in 6.7% of cases, it was the father. Within the reports, children had, on average, three medical problems reported (range missing information – 19). The most commonly reported symptom was apnoea (26.8% of case reports), followed by diarrhoea (24.6%) and seizures (17.5%). Seventy-six other symptoms were recorded in this case series and included behaviour (not defined), asthma, allergy, fevers, unspecified pain, infection or bleeding. Symptoms were induced in 57.2% of cases, and of these 48.8% were induced while the child was in hospital. While the synthesis of information in this review is of high quality, reporting bias in case reports must be considered. [EL=2++]

A second systematic review searched for cases of MSBP that occurred outside the main countries where it is known to be well documented (UK, the USA, Canada, Australia and New Zealand).[66] In 59 articles from 24 countries, 122 cases were identified. Some of these also appear in the review cited above. The mother was the perpetrator in 86% of cases, the father in 4%, a spouse unrelated to the child in 4% and the grandmother in 2% (n=93). The majority of children were between 3 and 13 years (52%) with 26% under 3 and 12% over 13 years; 9% were adults (n=76). 54% of cases were male (n=81). Counts were not given on the different presentations but the authors commented on similarities in distribution with other systematic reviews. A dissimilarity in the prevalence of induced apnoea was noted. [EL=2++]

A narrative systematic review[67] summarised the two articles above and added information from a study by Folks(1995)[68] in which two patterns of presentation were identified: apnoea, seizures and cyanosis or diarrhoea and vomiting, nausea and bone and joint problems. The most common forms of assault were suffocation, giving drugs and poisoning. The authors also noted the wide variety in fabricated illnesses. Histories of multiple hospitalisations and repeated medical investigations were also mentioned in cases of fabricated or induced illness. [EL2++]

A study from the Netherlands identified cases of MSBP in paediatric gastroenterology.[69] The authors presented a wide range of illnesses and discussed the investigations that were undertaken.

One study sought out cases of MSBP in children older than 6 years.[70] The authors identified nine cases from their clinic over a 2 year period (2001-2003) and 42 from the literature (1966-2002) and the oldest patient was 17 years (mean age across both groups was 9.3 years (n=41 as data were only available on 32 cases from the literature). False reporting occurred in all of the clinic cases (n=9) and 62% of the literature sample. Many of the cases from the literature are addressed in Sheridan (2003).[64]

A retrospective chart review of 24 years detailed presenting complaints and associated falsified or induced conditions in cases of paediatric condition falsification (PCF).[71] Comparisons were made between cases where there was a history of allergy, asthma, sinopulmonary infections, ear, nose and throat (ENT) surgery or drug sensitivity (study patient n=71) and other cases of PCF (n=33). Presenting features were asthma, sinopulmonary disease or hearing loss (n=14), CNS disease/seizure (n=23), apnoea: (n=17), GI symptoms (n=15), other infections (n=8), failure to thrive (n=5), sexual abuse (n=2), immune dysfunction (n=1), other (n=3). Associated falsified or induced conditions included haematologic bleeding, infections, vomiting, diarrhoea, failure to thrive, apnoea, seizures and a number of others. [EL=3]

### Evidence statement

Studies that bring together reported cases of fabricated or induced illness suggest that the most common presentations are apnoea, diarrhoea and seizures. Males are no more likely than females to be subject to this type of maltreatment and the perpetrator is the mother in most cases.

### GDG considerations

The complexity of FII suggests that a case is unlikely to cause suspicion on first presentation to a healthcare professional as the histories that perpetrators provide are often intricate, knowledgeable and believable. Common methods of inducing illness are smothering and poisoning. The GDG's clinical experience suggests that FII may only be diagnosed once there has been recognition that there are inconsistencies in the history, presentations and assessment findings. The GDG found descriptions of the indicators of fabricated or induced illness made in Working Together to Safeguard Children[1] and its supplementary guidance[124] to be good representations and has adapted them for use here.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should consider fabricated or induced illness if a child's history, physical or psychological presentations and/or findings of assessments, examinations or investigations yield a puzzling discrepancy to a recognised clinical picture. This still applies even if the child has a previous or concurrent established physical or psychological illness or disorder.

Healthcare professionals should suspect fabricated or induced illness if, in addition to the above, one or more of the following is present:

- reported symptoms and signs are not seen to begin if the carer is absent
- reported symptoms are only observed by the carer
- there is an inexplicably poor response to prescribed medication and other treatment
- new symptoms are reported on resolution of previous ones
- history of events which are biologically implausible (e.g. small infants with a history of very large blood losses who do not become unwell or anaemic)
- over time the child is repeatedly presented with a range of signs and symptoms; and multiple opinions are sought inappropriately and persistently in both primary and secondary care
- the child's normal, daily life activities are being compromised beyond that which might be expected for any medical disorder from which the child is known to suffer, for example school attendance, use of aids to daily living such as wheelchairs
- the parent insists on a medical condition being investigated, recognised and treated in their child despite contrary clinical assessment and which healthcare professionals find difficult to challenge.

**Research Recommendation**

Are the indicators of fabricated or induced illness as described in the recommendations valid for discriminating FII from other explanations?

*Why this is important*

Although the alerting signs have been developed based on clinical experience and are considered clinically useful in detecting FII, there is a need to establish their discriminant validity. This could be achieved by a prospective study.

## 6.8 Inappropriate or unexplained poor school attendance

All children of compulsory school age (the term following a child's fifth birthday to the end of the school year in which they turn 16) must receive a suitable full time education. Parents are legally responsible for this, either at a school or by making other arrangements in conjunction with the local authority. All schools must keep attendance registers and so can provide data about individual children.

### GDG considerations

A literature search was not conducted in this area as an evidence base in the medical literature was not anticipated. Poor school attendance or persistent lateness may constitute neglect of the child's education due to parental failure to ensure that their child attends school. The stated reason for the poor attendance may be ill-health and this may or may not be valid. The GDG believes that, in some circumstances, these absences may be due to fabricated illness and may go unnoticed by the school as ill-health is an accepted reason for absence. The GDG notes that this is an uncommon occurrence but maltreatment should be excluded in these circumstances.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

**Recommendations**

Healthcare professionals should consider child maltreatment if they become aware of poor school attendance that has no justification on health, including mental health, grounds.

Please refer to pp33-34 for the definition of 'consider' and its associated actions.

# 7. Emotional, behavioural and interpersonal/social functioning

All forms of child maltreatment have the potential to compromise a child's emotional, behavioural and interpersonal development. This may occur because of a significant failure of parents or carers to provide adequate stimulation of and responsiveness to a child's developing emotional, behavioural and interpersonal needs, as in cases of neglect; or because of distorted emotional and interpersonal communications by parents or carers, as in emotional abuse; or because of trauma possibly associated with physical or sexual abuse. In many cases of maltreatment, disturbances to a child's emotional, behavioural and interpersonal development may be the most obvious and enduring sign of the maltreatment.

## 7.1 Emotional and behavioural states

Certain emotional and behavioural states, as indicated by self-report or observed through a child's behaviour, can become heightened or more dominant, with a corresponding reduction in the range of emotions experienced and behaviours displayed, in a child who has suffered maltreatment.

### Overview of available evidence

Systematic literature searches identified a large body of literature that addresses behavioural and emotional characteristics in association with child maltreatment. Secondary screening identified systematic reviews for some of these characteristics. Where systematic reviews were not identified for particular aspects, individual studies were reported.

### Narrative summary

Two systematic reviews synthesised data on the psychological effects in children of witnessing domestic violence.[72;73] In the first (search date end 2000)[72], the authors addressed six general categories of psychosocial adjustment (internalising (including somatic complaints), externalising, other psychological problems, total psychological problems and academic problems) and six types of specific responses to hypothetical episodes of interpersonal conflict (negative affect/distress, negative cognitions, withdrawal, intervention, aggression and positive coping). The results of the meta-analyses are summarised in table 7.1. The methodology of the review was found to be good but there was variation in the quality of studies used in the synthesis, particularly in the way non-witnesses of domestic violence were ascertained. [EL=2+]

The second systematic review on domestic violence[73] extracted data on 41 studies and found that 40 studies showed that children exposed to domestic violence had worse outcomes on internalising, externalising and post traumatic stress disorder, although the pooled effect size was cited to be small. The authors found that outcomes were similar in boys and girls and drew no conclusions about the effect of age on outcome. [EL=2-]

| **Demeanour** | |
|---|---|
| Fearful | CSA cases more symptomatic than nonclinical controls in 5/5 studies[74] |
| anxious | CSA cases more symptomatic than nonclinical controls in 5/8 studies[74] |
| withdrawn | CSA cases more symptomatic than nonclinical controls in 11/11 studies[74] |
| | Witnesses of domestic violence vs. nonwitnesses: no significant difference in pooled result (5 studies)[72] |
| low self-esteem | CSA cases more symptomatic than nonclinical controls in 3/6 studies[74] |

| | |
|---|---|
| Social avoidance or isolation | No significant difference between maltreated and non-maltreated children[75] |
| unhappy, depressed | CSA cases more symptomatic than nonclinical controls in 10/11 studies[74] |
| Internalising | CSA cases more symptomatic than nonclinical controls in 8/8 studies[74] |
| | Witnesses of domestic violence significantly worse than nonwitnesses: in pooled result (47 studies)[72] |
| | Moderate association in children exposed to domestic violence (58 studies)[76] |
| Negative affect/distress | Witnesses of domestic violence significantly worse than nonwitnesses in pooled result (11 studies)[72] |
| Frozen watchfulness | No suitable published literature retrieved |
| **Behaviour** | |
| Aggression | Witnesses of domestic violence vs. nonwitnesses: no significant difference in pooled result (3 studies)[72] |
| Social problems | Witnesses of domestic violence significantly worse than nonwitnesses in pooled result (15 studies)[72] |
| Academic problems | Witnesses of domestic violence significantly worse than nonwitnesses in pooled result (11 studies)[72] |
| Externalising | CSA cases more symptomatic than nonclinical controls in 7/7 studies[74] |
| | Witnesses of domestic violence significantly worse than nonwitnesses: in pooled result (45 studies)[72] |
| | Moderate association in children exposed to domestic violence (53 studies)[76] |

**Table 7.1**: Demeanours and behaviours as reported in the literature.

A narrative review of sexual abuse of boys (search dates 1985 -1997) reported on the consequences of sexual abuse.[77] This review included some studies in adult males and a number of studies in specific populations such as chemical abusers. In studies that compared abused with non-abused males, rates of the following were significantly higher in abused than non-abused males: major depression (four times), bulimia (three times), antisocial personality disorder, behaviour problems, low self-image, runaway behaviour and legal problems.

A review synthesised research on the impact of sexual abuse on children.[74] The authors extracted data from studies that compared CSA cases with non-clinical controls on the following demeanours: anxiety, fear, depressed, withdrawn, poor self-esteem and the composite symptoms of internalising and externalising behaviours. A summary of results is shown in table 7.1.

### Evidence statement

The systematic reviews indicate that abused children, regardless of the manner of abuse, display more emotional and behavioural problems than children who have not been maltreated. The heterogeneity of definitions, ascertainment and reporting in the studies should be taken into account when drawing conclusions.

See pages 85-87 for ‘GDG considerations’ and ‘Recommendations’.

### Challenging antisocial and aggressive behaviour

Challenging aggressive and antisocial behaviour can be elevated in a child who has suffered maltreatment. This may occur because of the failure by parents or carers to place effective boundaries on a child’s early behavioural demands or in cases where the child is actively modelling aggressive

behaviour witnessed in the home, either directly toward the child as in emotional or physical abuse or between adults in the home as in domestic violence.

### Narrative summary

A narrative systematic review examined the link between child maltreatment and youth violence between the ages of 12 and 21 years.[78] No formal synthesis of results was conducted. The authors conclude that physical abuse is a predictor of youth violence but also that other forms of abuse of varying severity can lead to youth violence.

A study of young people who show fire-setting behaviour (n=205, mean age 11.2 years, s.d. 3.1) investigated differences in fire-setting behaviour between maltreated and non-maltreated children.[79] [EL=3] The children and their care givers were recruited from an assessment and treatment centre for juvenile fire-setters. Maltreatment status was ascertained by asking the care giver if the child had ever been abused or neglected; suspected abuse cases were excluded. Forty-eight per cent were found to have been maltreated. Fire-setting behaviour was recorded using a semi-structured interview. Maltreated children were found to have statistically significantly more frequent fire-setting episodes and to use a wider range of media. The differences between groups were small in both cases.

See pages 85-87 for 'GDG considerations' and 'Recommendations'

## Sudden and unexplained behavioural or emotional change

Unexplained behavioural or emotional change is unlikely to occur in situations where a child is exposed to more chronic deficiencies in the care offered them by parents or carers, as in many cases of neglect and emotional abuse, but is more likely to occur in response to more discrete experiences of abuse as in certain cases of physical and sexual abuse.

### Narrative summary

A case-control study[80] aimed to determine how often sexually abused boys present with somatic and behavioural symptoms. One hundred and seven (sexually abused) school boys (cases) were compared with 107 school boys not sexually abused (controls). The results showed that somatic and behavioural symptoms were uncommon in both cases and controls. 83.6% of cases and 76.7% controls did not have symptoms. No significant differences were found between the numbers of cases and controls who had presented with somatic and behavioural complaints (18 cases vs 25 controls). There were significant differences between cases and controls with symptoms lasting over a year ($p<0.05$). [EL=2-]

A cohort study[81] sought to explore the relationship between child abuse or neglect and school performance mainly academic success, peer status, and adaptive functioning. The study found that the mean academic performance (100-500) at age six was 260 (SD=85) at age eight was 263 (SD=95). The mean peer status (1-5) at age six was 3.5 (SD=0.85) at age eight was 3.3 (SD=0.96). The total adaptive functioning (4-28) at age six was 14.6 (SD=5.16) at age eight was 14.6 (SD=5.28). Maltreatment was significantly associated with poorer academic performance ($p<0.01$) and poorer adaptive functioning ($p<0.001$) but not with peer status. [EL=2-]

Another study[82] aimed to determine the relationship between child maltreatment and timing of learning difficulties. Three-hundred maltreated children were compared with 300 non-maltreated children. The study found maltreated children were at higher risk of repeating kindergarten and first grade than non-maltreated children. There was no difference in the risk of repeating a grade for the first time. The absolute risk of receiving a poor English or mathematics grade changed across elementary years whereas the relative risk by maltreatment status did not. [EL=3]

A comparative study[83] was conducted in a community sample of 420 maltreated children to determine the relationship between child abuse and neglect to academic performance and discipline referrals and suspensions. The study found that maltreated children performed significantly below non-maltreated children in standardized tests and grades and were more likely to repeat a grade. Maltreated children also had significantly more discipline referrals and suspensions. [EL=3]

A descriptive study[84] aimed to identify the predictors of attributions of self-blame and internalizing behaviour problems in sexually abused children by using the Sexual Assault profile, CBCL and Social adjustment scale. The study found that a child having close relationship with the perpetrator, severe sexual abuse, perceiving sexual abuse as disgusting and coping with abuse by pretending it never

happened led to increased attributions of self blame. These factors did not predict internalizing behaviour problems. [EL=3]

Another descriptive study[85] investigated the differences in achievement related classroom behaviours among maltreated and non-maltreated children (receiving public assistance and lower middle class). The Hahnemann Elementary school behaviour rating scale was used. The study found that maltreated children exhibited less classroom behaviour positively linked with academic achievement compared to non-maltreated children (receiving public assistance) and non-maltreated children of lower middle class. [EL=3]

A study[86] tested the hypothesis that physically abused children are characterized by increased usage of immature defence mechanisms as compared to non-abused/non-neglected children. The investigators used the Child Suicidal Potential Scales (CSPS), a clinician administered interview schedule consisting of nine sections. The comparison group consisted of children neglected by their parents and children who were neither abused nor neglected The results showed significant differences between physically abused and the non-abused/ non-neglected for all ego defences except displacement. Significant differences were found between physically abused and neglected children for regression, denial and splitting, projection, and introjection (high scores for physically abused children) for compensation and undoing (higher scores for the neglected) children). [EL=3]

A study[87] compared parent symptom reports from three prepubescent groups: non-abuse group (NA), sexual abuse with perpetrator confession (SA) and sexual abuse without perpetrator confession (AA). The Structured Interview for Signs Associated with Sexual Abuse (SASA) was used. The results showed that both SA and AA groups reported increased sleep problems, fearfulness, emotional and behavioural changes, concentration problems, and sexual curiosity and knowledge than the NA group. [EL=3]

See pages 85-87 for ‘GDG considerations’ and ‘Recommendations’

### Disturbances of attachment

Problematic attachments become evident through the interactions that young children have with other people and emanate from earlier interactions between the child’s primary caregivers and the child. Probable indicators of problematic attachments are: being over-friendly with strangers and craving attention and affection from adults who are not the primary carers. Attachment problems are also probably indicated by the lack of seeking or accepting affection and comfort when the child is significantly distressed, frightened or feels threatened. The degree to which these behaviours are observed and are concerning depends on the age of the child.

### Overview of available evidence

Two systematic reviews were found that reported on the association between insecure attachment and child maltreatment.[88;89] There was some overlap in the samples that were included in the accompanying meta-analyses.

### Narrative summary

The more recent systematic review[88] (search dates 1988-2005) identified eight studies that investigated an association between child maltreatment and attachment difficulties. The inclusion criteria were that the maltreated children were younger than 48 months, the study included comparison groups, the Strange Situation procedure (a procedure that takes place under controlled conditions that is designed to assess infant attachment style) or an adaptation of it was used and data were reported in sufficient detail to warrant meta-analysis. Pooling data from the studies, the authors found that 80% of maltreated children had insecure attachment compared to 36% of the comparison group. Using meta-analytic techniques, the odds ratio for having insecure attachment and being maltreated compared to not being maltreated was 6.5 (95% CI 3.7-11.6). [EL=2+]

The second review[89] identified five studies that investigated the relationship between maltreatment and disorganised attachment. These studies included a total of 323 children between 11 and 48 months of age. Using the study size to weight the effect from each individual study revealed a pooled correlation coefficient of 0.41 for disorganised attachment in maltreated children compared to nonmaltreated children. The study reported that 48% of maltreated children had insecure attachment compared to 17% of the comparison groups.

See pages 85-87 for 'GDG considerations' and 'Recommendations'

### Emotional dysregulation

Emotional regulation is viewed as a key indicator of effective emotional development during a child's early years charting the move from the more emotionally labile presentation of the infant to the more measured and more easily understood presentation of the older child, whose emotional responses are seen as appropriate and proportionate to the incident or experience causing the emotion. A child who has suffered maltreatment may either not have gained this level of regulation due to the adverse nature of the parenting or care offered them or may have lost the ability to regulate their emotions because of their experience of maltreatment

No relevant literature was identified as much of the literature in this area is based on scenarios set up by researchers rather than clinical reports.

See pages 85-87 for 'GDG considerations' and 'Recommendations'

### Compliance

No suitable published literature was identified.

See pages 85-87 for 'GDG considerations' and 'Recommendations'

### Role reversal

No suitable published literature was identified.

See pages 85-87 for 'GDG considerations' and 'Recommendations'

### GDG considerations

Much of the research in this field uses composite scores in instruments measuring internalising and externalising behaviours to assess demeanour and behaviour problems. In order to make useful recommendations, the GDG proposes that individual items in these instruments be used to inform healthcare professionals in their assessment. The GDG believes that any behaviour or demeanour that is not consistent with a child's age and developmental stage should be a reason to seek information about the origins of that demeanour or behaviour. The GDG wishes to note that, in the context of child maltreatment, labelling behaviour problems, for example as oppositional defiant disorder, may not be helpful in the absence of eliciting the cause.

The GDG notes that maltreatment is a major psychosocial stressor in children and that emotional and behavioural problems are major consequences of child maltreatment, although they are often unrecognised as such. The GDG's clinical experience is that emotional and behavioural problems due to maltreatment are not always specific to the particular maltreatment and are hard to quantify, yet no less important in raising concerns or suspicion of abuse than overt physical signs. Children can show a wide range of responses to maltreatment and the GDG believes that it is important for healthcare professionals to be aware of the possibilities ranging from extreme withdrawal to aggression and anger.

The attachment literature uses hypothetical scenarios to measure attachment. From the results of the systematic reviews, it can be inferred that disorganised attachment in young children is associated with maltreatment. Aggression and difficulties in interpersonal relationships, compulsive caregiving and coercive controlling towards the parent are associated with disorganised attachment.

Role reversal, where a child takes on a parenting role, either to the primary caregivers or to siblings, is a cause for concern when it means that the child or young person is undertaking tasks that are not appropriate for his or her developmental stage and when taking on a parenting role means that the child forgoes school in order to care for the parent. The GDG's opinion is that role reversal can be apparent when a child or young person takes on the task of habitually assuming a comforting responsibility for a distressed parent or where the child takes excessive care not to upset the parent.

It is the GDG's clinical experience that some children who have been sexually abused can be overly compliant or passive in situations, such as ano-genital examinations, where one would expect them to be resistant or reactive. In these situations, some maltreated children can react in other ways that are not developmentally appropriate.

The GDG believes that the presence of a neuro-developmental disorder such as ADHD or difficulties within the autism spectrum do not preclude the possibility of maltreatment.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should consider child maltreatment if a child or young person displays or is reported to display a marked change in behaviour or emotional state that constitutes a departure from the normal developmental trajectory for this child and is not explained by a known psychosocial stressor or medical cause.

For example:

• recurrent nightmares containing similar themes

• extreme distress

• markedly oppositional behaviour

• withdrawn.

Healthcare professionals should consider child maltreatment if a child's behaviour or emotional state is not consistent with the child's age and developmental stage or the child's emotional state or behaviour cannot be explained by medical causes, neurodevelopmental disorders (e.g. ADHD, autism spectrum disorders) or other psychosocial stressors (e.g. bereavement or parental separation) See lists below for examples.

| Emotional state | Behaviour | Interpersonal behaviours |
|---|---|---|
| Fearful,<br>Withdrawn,<br>Low self-esteem | Aggressive,<br>Oppositional | Indiscriminate contact/affection seeking or over-friendliness to strangers including healthcare professionals<br>Excessive clinginess<br>Persistently resorting to gaining attention<br>Child fails to seek or accept appropriate comfort or affection from an appropriate person when significantly distressed<br>Socially isolated |

Healthcare professionals should consider child maltreatment if a child shows repeated, extreme or sustained emotional responses out of proportion to a situation that are not expected for the child's developmental age or where a medical cause or neurodevelopmental disorder (for example ADHD, autism spectrum disorders and bipolar disorder) has been explored. These include:

• anger or frustration expressed as, for example, temper tantrum in a school-aged child or frequently flying into a rage at the least provocation

• distress expressed as, for example, inconsolable crying.

Healthcare professionals should consider child maltreatment if a child or young person regularly and persistently shows or is reported to assume age-inappropriate responsibilities which interfere with normal developmental tasks such as attending school. For example:

• a child may adopt a care-taking role for parents or siblings

• a very young child may show excessive comforting behaviours when witnessing parental distress

• children may demonstrate excessively "good" behaviour to prevent parental disapproval.

Healthcare professionals should consider child maltreatment if a child responds to a health examination/assessment in an unusual, unexpected and developmentally inappropriate way, for example extreme passivity, resistance or refusal.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions.

**Research Recommendation**

What aspects of behaviours and emotional states as alerting individual signs discriminate maltreated children from non-maltreated children in the healthcare setting?

*Why this is important*

Much of the research in this area uses composite scores from instruments or scenarios to discriminate maltreated from non-maltreated children. To translate these scores into items that are usable for healthcare professionals who are meeting children for the first time, it is necessary to know whether particular behavioural and emotional states can be used to identify maltreated children. A prospective comparative study in the healthcare setting is required.

## 7.2 Behavioural disorders/abnormalities either seen or heard about

### 7.2.1 Self-harm

Self-injurious behaviour includes cutting, scratching, picking, biting or tearing skin to cause injury, taking prescribed or non-prescribed medications at higher than therapeutic doses when the intention was not suicide, taking illicit drugs or alcohol when the intention is to harm the self, burning and pulling out hair or eyelashes. In some situations there may be the intention of harm to the self by means of abnormal patterns of eating.

It may be difficult to be certain whether the intention of a self-injurious behaviour was suicide or self-harm and it may be unclear whether a risk-taking behaviour is part of normal adolescence. Suicidal thoughts may exist on their own and are not synonymous with suicidal behaviour. A number of terms are used in the literature to describe aspects of self-injurious behaviour, including deliberate self-harm, self-destructive behaviour and non-fatal self-harm.

#### Overview of available evidence

A total of 4326 articles were identified and 32 articles were selected for detailed assessment. No relevant systematic reviews were identified. All the studies used an observational design – case-control, cohort or case-series. A detailed description of each study is provided below.

A prospective cohort study (n = 842) undertaken in the USA examined the relationship between behavioural and emotional problems and physical, sexual and emotional abuse (based on questionnaire responses) in a population of incarcerated adolescents (average age 15.8 years, 84.2% male, 40% Caucasian).[90] The study found that after adjusting for demographic variables (age, gender, ethnicity) that emotional abuse was a predictor ($p < 0.05$) of internalising behaviour (including self-harm), and that physical and sexual abuse were predictors ($p < 0.01$) of externalising behaviour (including self-destructive behaviour). However, other variables such as age ($p < 0.01$), gender ($p < 0.01$)) and ethnicity ($p < 0.001$) were also significant factors in internalising and externalising behaviour. The study concluded that different forms of maltreatment have different behavioural impacts. (2001) [EL = 3]

A case-control study (n = 86) from the USA examined the relationship between maltreatment (based on questionnaire responses) and non-suicidal self-injury (NSSI) in a community sample of adolescents (aged between 12 to 19 years; mean = 17.4 years, 78% female, 73% Caucasian).[91;92] Two groups were selected: group 1 (n = 64) with a history of NSSI and group 2 (n = 30) without a history of NSSI (94 total, only 86 completed all questionnaires). The results of univariate analysis showed that physical neglect ($p < 0.05$), emotional abuse ($p < 0.01$) and sexual abuse ($p < 0.05$) were all predictors of NSSI, but emotional neglect and physical abuse were not. However, the study also found that a self-critical cognitive style was a mediating factor between emotional abuse and NSSI. The study concluded that not all types of maltreatment are associated with self-harm. [EL = 2-]

A case-control study (n = 2485) from Australia examined the relationship between sexual abuse (based on questionnaire responses) and suicidal behaviour in a community sample of schoolchildren (mean age 14 years, 55.5% males).[93] The study found that 87 (3.6%) children had been sexually abused. Furthermore, the study found that 659 (27.1%) had suicidal ideation, 328 (13.7%) had plans for suicide, 253 (10.5%) threatened to commit suicide, 442 (18.4%) self-harmed, 139 (5.8%) had attempted suicide and 25 had required emergency treatment as a result of a suicide attempt. The study compared those who had been sexually abused against those who had not. The study found that 73% of abused

compared to 25% of non-abused had had suicidal thoughts (p <0.001), 30% versus 5% had injured themselves five or more times (p < 0.001), and 36% compared to 8% had been hospitalised as a result of a suicide attempt (p < 0.001). Using multivariate analysis the authors examined the mediating factor of distress (none, low, high) adjusting for depression, hopelessness and family functioning on suicidal behaviour in boys and girls. The study examined differences due to severity of abuse based on three categories: abused, low level abuse, high level abuse. The study found adjusted OR of 5 (1.5 to 16.8), non-significant, and 7.4 (1.7 to 31.8) for suicidal ideas, respectively. For self-harm the adjusted OR were 4.3 (1.5 to 12.6), not significant, 4.8 (1.4 to 16.6). For attempted suicide the adjusted OR were 15.0 (4.7 to 47.9), not significant, 18.7 (5.0 to 70.1). For having planned suicide the adjusted OR were 10.6 (3.5-32.7), ns, 13.3 (3.6-49.6). For suicide threats the adjusted ORs were 10.9 (3.9-30.4), 10.4 (1.4-77.3), 11.1 (3.4-35.7). The study found that for girls the idea of suicide was significantly higher amongst those who reported a high level of abuse compared to those who had not been abused (OR = 3.3 [1.1 to 10.2]), but for self-harm and attempted suicide there was no difference between abused and non-abused. The study concluded that sexual abuse leads to increased risk of self-harm and suicide, especially in boys. [EL = 2-]

A cross-sectional survey (n = 489) undertaken in Hong Kong examined the psychological impact (self-harm and substance abuse) of physical maltreatment (diagnosed by responses to questionnaire) in adolescents from a school survey (aged > 13 year).[94] The study found 4.5% had received corporal punishment from family members within the past 6 months, 10.9% had been beaten by a family member for no reason within the past six months, and 10.4% reported being beaten to injury by a family member at some point. The study found an association with self-injury and 'beaten to injury', with an OR of 4.42 for 'would hurt themselves when faced with difficulties', an OR of 5.03 for 'think of hurting themselves' and an OR of 8.47 for 'who have tried hurting themselves' (all p < 0.01). Physical maltreatment was not associated with 'tried hurting self' (p = 0.054). The study concluded that physical maltreatment had an impact on psychological well-being. [EL = 3]

A case-control study (n = 405) undertaken in the USA examined factors associated with suicide attempts in children (aged 7 to 17, 12.7 years, 54% male, 83% Caucasian) being treated for bipolar disorder.[95] The study found that 128 of 405 had attempted suicide and that 41 (32%) of these children had been physically or sexually abused (based on responses to questionnaire) compared to 54 (20%) of the non-attempter group (p = 0.006). The study also found that psychiatric hospitalisation, self-injurious behaviour, mixed episodes, psychosis and age were significant factors on suicide attempts. In addition, family factors such as depression, familial substance use and suicide attempts, and co-morbid conditions, such as panic disorders and substance use were also predictors of suicide attempts. The regression model produced by the authors to explain maximum variance did not include either sexual or physical maltreatment. The study concluded that multiple clinical factors had to be taken into account when assessing suicide risk. [EL = 3]

A case-control study (n = 105) undertaken in the USA examined the relationship between physical and sexual abuse (based on any report to authorities) and psychological problems and suicide attempts in children (aged 12 to 18; 73 female) admitted to an inpatient psychiatric facility.[96] There were four groups: no abuse (n = 35), sexual abuse (n = 17), physical abuse (n = 22), and sexual and physical abuse (n = 31). The study found no statistical difference between groups in terms of suicidal ideation (thoughts 60.0%, 82.4%, 59.1%, 74.2%; suicidal behaviour 37.1%, 29.4%, 40.9%, 29.0%; threats of suicide 32.3%, 31.3%, 26.3%, 43.3%, respectively; suicide attempts 48.6%, 47.1%, 45.5%, 61.3%, respectively). The study concluded that the symptoms of adolescents who are psychiatrically hospitalised do not differ with abuse history. [EL = 3]

A prospective cohort study (n = 140) undertaken in the USA examined the relationship between childhood sexual abuse in females (abuse reported by child to have happened before the age of 14 years) and re-victimisation and self-harm in children who had been sexually abused (average age 18.81 years).[97]The study found that in the sexually abused group (n = 70) 32.3% had self-harmed compared to 8.8% in the comparison group (n = 70, p = 0.02). In addition, the study found no relationship between physical abuse, neglect or emotional abuse and self-harm. The results from multiple regression found an OR of 5.64 for those who had been sexually abused and self-harmed (p < 0.01), but OR of 2.26 for physical, 0.74 for neglect and 0.57 for emotional (all non-significant). The study concluded that people who had been sexually abused were more likely to self-harm than those who had not been sexually abused. [EL = 2+]

A case-control study (n = 188) undertaken in the USA examined the relationship between physical abuse and suicidal behaviour in adolescents (aged 12 to 18) who had either been physically abused (n =

99; based on social service register) or not (n = 99; randomly identified via telephone interview; age 15 or 16; sexually abused excluded). The study found a difference between groups for suicide ideation (p = 0.014) but not for probability of suicide. Multivariate analysis found that physical abuse was not a predictor of suicide probability (p = 0.099), whilst other factors were: family cohesion (p = 0.004) and adult disruptive disorder (p = 0.0003), adolescent unipolar depression (p = 0.003). The study concluded that abused adolescent had higher suicide probability scores than non-abused, but the link between the two was not direct.[98] [EL = 2+]

A case-control study (n = 71) undertaken in the USA examined the relationship between abuse and neglect (based on childhood trauma questionnaire) and suicidal behaviour in children (52.2% girls, mean age 14.8 years, 5% Caucasian) admitted to an acute medical facility over a one year period. The study found that sexual abuse ($p < 0.001$), physical abuse $p < 0.01$), emotional abuse ($p < 0.01$), emotional neglect ($p < 0.001$), but not physical neglect (ns), were linked with suicide attempts. Multivariate analysis showed that sexual abuse ($p < 0.01$) and emotional neglect ($p < 0.05$) but not physical abuse, emotional abuse or physical neglect were linked to attempted suicide. Furthermore the analysis showed that sexual abuse ($p < 0.01$) and emotional neglect ($p < 0.05$) but not physical abuse, emotional abuse or physical neglect were linked to self-harm. When gender was added into the model, female gender (p = 0.001) and sexual abuse (p = 0.05) were predictors of attempted suicide. The study concluded that emotional neglect was an unrecognised predictor of attempted suicide.[99] [EL = 2-]

A case-control study (n = 3416) undertaken in the USA examined the factors associated with suicide attempts in female adolescents involved in a twins cohort study (aged mean of 15.5 years, 13% non-Caucasian ). The study found that 4.2% (n = 143) had attempted suicide. The study found using multiple regression that physical abuse (based on questionnaire; 2.2% vs 15.7%) was associated with attempted suicide (OR = 3.5 [95%CI 1.6 to 7.3]). It also found that alcohol dependence, conduct disorder, major depression, social phobia, and African-American ethnicity were significant markers, but alcohol abuse, any specific phobia and generalised anxiety were not. Furthermore the study found that suicide within the family was a significant predictor for attempting suicide. The study concluded that familial factors and possibly genetics played a role in suicide attempts.[100] [EL = 2-]

A case-control study (n = 292) undertaken in New Zealand examined the risk-factors for suicide attempts in adolescents (aged 13 to 24). The study compared those who had attempted suicide requiring medical treatment (n = 129) against a randomly selected group of people who had not (n = 153, age- and gender stratified). The study found that sexual abuse (adjusted OR = 3.7 [95%CI 1.6 to 8.3], $p < 0.005$) was a marker for suicide attempts. However, it also found that poor parental relationship, affective disorder, substance use, antisocial behaviour, age, low education outcome, low income and residence changed within 6-months were also significant predictors ($p < 0.001$ to 0.05). The study concluded that risk of suicide increased as social adversity increased.[101] [EL = 2-]

A case-control study (n = 88) undertaken in Australia examined the risk-factors associated with self-harm in adolescents (average age = 16.4 years). The study compared those who had self-harmed (n = 52, 69% female) against a reference group (n = 36, 61% female) being treated for medical conditions or undergoing surgery with a no history of self-harm or psychological illness. The study found that physical abuse (based on responses to a questionnaire, 13 versus 2, OR = 6.5[(95% CI 1.5 to 29]), but not sexual abuse (6 versus 3, OR 2.0 [95% CI 0.5 to 8]) was a predictor of self-harm. The study also found that family structure and substance use were significant predictors of self-harm. The study concluded that self-harm was linked to serious personal and inter-personal problems and a multidisciplinary approach was required to identify and treat it.[102] [EL = 2-]

A cross-sectional survey (n = 352) undertaken in the USA examined the relationship between sexual and/or physical abuse (reported by questionnaire) and substance use and suicide amongst pregnant teenagers. The study found that 39 had been physically abused, 52 had been sexually abused, 11 had been sexually and physically abused, and 272 had not been abused. Of these groups, 46%, 33%, 83% and 12%, respectively reported suicidal ideation ($p < 0.0001$). The study concluded that pregnant teenagers should be screened for abuse and suicidal ideation.[103] [EL = 3]

A case-control study (n = 114) undertaken in Israel examined the relationship between depression and suicide in abused children (aged 6 to 12 years, 61.4% males). There were three groups: group 1 (n = 41) had been physically abused (based on questionnaire responses); group 2 (n = 38) had been neglected; and group 3 (n = 35) had been neither abused nor neglected. The study reported that suicidal ideation was found in 22 of group 1, 2 of group 2 and 2 of group 3 ($r2 = 33.63$, $p <.001$). Suicidal expression was found in 23 of group 1, 2 of group 2 and 2 of group 2 ($r2 = 37.21$, $p < 0.001$). Risk-taking behaviour

was found in 31 of group 1, 2 of group 2 and 3 of group 3 (r2 = 57.54, P < 0.001). The study concluded that the physically abused group had higher suicidality than the others.[104] [EL = 2-]

A case-control study (n = 117) undertaken in the USA examined the relationship between maltreatment and suicide in adolescents (aged 13 to 18 years, mean age 14.6 years, 66 females, 82.4% Caucasian) admitted to a psychiatric facility. The group was split between those who had attempted suicide, suicidal ideators and those who were not. The study found that those reporting having been abused (based on questionnaire, n = 55) were significantly more likely to have attempted suicide or have suicidal ideation than those who were not (n = 62) (p < 0.05). Furthermore, the study found that frequency of abuse was related to number of suicide attempts and suicidal ideation for both sexual and physical abuse (p < 0.05). The study found that duration of abuse was related to number of suicide attempts and suicidal ideation for sexual abuse (p < 0.05) but not for physical abuse. The study concluded that history of abuse was related to number of suicide attempts.[105] [EL = 3]

A case-control study (n = 157) undertaken in The Netherlands examined the relationship between life events in childhood (aged less than 12 years) and suicidal behaviour in adolescents (aged more than 12 years) in a group aged 14 to 21 (mean age 17.5 years; 41 females). The study compared three groups: group 1 (n = 48) were people who had attempted suicide (selected within mental health services), group 2 (n = 66) were depressed (selected within mental health services), group 3 (n = 43) were non-depressed who had never attempted suicide (selected at random from a student population). The study found a significant differences (p < 0.05) between the rate of physical abuse before the age of 12 years between the three groups: on average people who had been attempted suicide reported 0.19 (SD 0.49) sexual abuse events, depressed adolescents reported 0.14 (SD 0.43) events, and normal controls 0.00 events per person. The study found no significant differences between the three groups and sexual abused before the age of 12 (0.17 [SD 0.48] vs. 0.05 [SD 0.21] vs. 0.05 [SD 0.21]). The study found that 0.23 (SD 0.42), 0.29 (SD 0.46), 0.07 (SD 0.26) had been physically abuse after age of 12 (p < 0.05) for difference between depressed and normal controls. The study found that on average in each group 0.44 (SD 0.68), 0.26 (0.54) and 0.05 (SD 0.21) had been sexually abused after age of 12 (p < 0.05) for difference between attempters and normal controls. The study found that on average in each group 0.13 (SD 0.33), 0.09 (SD 0.29), 0.00, respectively, had been physically abuse within past year (non-significant). The study found that on average for each group 0.10 (SD 0.31), 0.05 (0.27) and 0.00 had been sexually abused within past year (p < 0.05) for difference between attempters and normal controls. However, change in living situation, change in caretaker, separation of parents and total number of life events experienced were all associated with differences between groups (p < 0.05). The study concluded that the number of life events were link to suicidal behaviour.[106] [EL = 2-]

A case-control study (n = 597) undertaken in the USA examined the relationship between sexual abuse and psychological problems (suicide and self-harm) in females (aged 15.6 years) being treated for substance abuse. The girls were divided into 4 groups: group 1 were non-victims (n = 383); group 2 experienced extra-familial abuse (based on questionnaire; n = 120); group 3 experienced intra-familial abuse (n = 47); and group 4 experience both extra-familial and intra-familial abuse (n = 43). The study found that suicidal behaviour was significantly more likely in the abuse girls than non-abused (p < 0.0001). There was no difference between groups for suicide attempts (20.4%, 35.7%, 56.5%, 44.2%). Suicidal thoughts was more likely in the abused against non-abused (52.4%, 64.1%, 65.2%, 74.4%, p < 0.05) and eating problems were also more prevalent (p < 0.05). However, nervousness (p < 0.01), sleeplessness (p < 0.001) and sexual problems (p < 0.001) were also linked to suicidal behaviour. The study concluded that within a group who already had multiple problems that sexual abuse lead to different and more serious psychopathology. [EL = 2-][107]

A case-control study (n = 570) undertaken in The Netherlands examined the characteristics of children (aged 15 or 16 years) who did or did not have a history of suicidal behaviour. The sample was taken from larger school survey of 13400 children. Group 1 had a history of suicidal behaviour (n = 185 females, 100 males) and group 2 did not (n = 185 females, 100 males). Analysis was undertaken by gender. For females the study found that physical abuse (based on questionnaire) (51% versus 24%, p < 0.001) and sexual abuse (32% versus 7%, p < 0.001) were related to attempting suicide. In addition, depression, suicidal thoughts, low self-esteem, feeling of failure, negative future achievements, and substance abuse were all significantly related to suicide attempts. For males the study found that physical abuse was non-significant (37% versus 32%) and sexual abuse (22% versus 2%, p < 0.001) was significantly related to attempting suicide. In addition, depression, suicidal thoughts, low academic achievement, and substance abuse were significantly related to attempted suicide. The study concluded in addition to other variables, that sexual and physical abuse need to be taken into account when dealing with youngsters demonstrating suicidal behaviour. [EL = 2+][108]

A cross-sectional survey (n = 775) undertaken in the USA examined the relationship between sexual/physical abuse and suicidal behaviour in children (aged 12 to 19, 65% male, 46% Caucasian) who were homeless.[109] The study found that 451 (58%) had thought about suicide (195 of 272 females and 256 of 505 males) and 266 of 775 (34%) had attempted suicide (130 of 272 females and 136 of 505 males). There were significant differences between genders in suicidal thoughts and suicide attempts ($p < 0.05$). The study found that 119 of 503 males and 189 of 272 females had been sexually abused (based on questionnaire), of these 96 males and 167 females this had happened before they left home. The study reported that 175 of 503 males and 153 of 272 females had been physically abused before leaving home. The study found that 225 of 503 males and 217of 272 females had been sexually and/or physically abused. In all cases females were significantly ($p < 0.05$) likely to have been abused than males. Logistic regression found that for females being sexually abused before leaving home (OR 3.2, [95%CI 1.8 to 5.6]) and being physically abused at home (OR 1.9 [95%CI 1.1 to 3.3]) was associated with suicidal behaviour. For males it found that being sexually abused at home (OR 4.3, [95%CI 2.5 to 7.1]) and being physically abused at home (OR 4.2 [95%CI 2.6 to 6.5]) was associated with suicidal behaviour. The study concluded that interventions on homeless children must take account of physical and sexual abuse. [EL = 3]

A cross-sectional survey (n = 1051) undertaken in the USA examined relationship between suicidal ideation and maltreatment or risk of maltreatment in a group of children (52.5% female, 55.1% Caucasian) who were eight years old.[110] The study found that 9.9% of the sample had thought about suicide. The study found that Caucasian ethnicity (OR 0.55 [95% CI 0.32 to 0.84]), maltreatment (OR 1.91 [95%CI 1.14 to 3.20]) and witnessed violence (OR 1.68 [95%CI 1.34 to 2.06]) were markers of suicidal ideation ($p < 0.05$). The study also found that psychological problems and substance use were significant predictors of suicide ideation ($p < 0.05$), but that maltreatment was not (OR 1.49 [95%CI 0.74 to 2.78]). Sub-group analysis on children who had been maltreated (rather than those at high risk) found that severity of physical abuse (OR1.24 [95%CI 1.04 to 1.48]), chronicity of maltreatment (OR = 1.19 [95%CI 1.02 to 1.39]) and multiple types of maltreatment (OR = 1.81 [95%CI 1.11 to 2.95]) were markers of suicide ideation. The study concluded that risk factors of ethnicity, maltreatment and witnessed violence were all mediated by a child's psychological and behavioural variables. [EL = 3]

A survey of secondary school students (n=839, mean age 15.9 years, range 14 to 17 years) in Turkey investigated the relationship between child maltreatment (physical, emotional, sexual abuse and neglect) and attempted suicide, self-mutilation and dissociation.[111] Thirty-four per cent of the cohort reported at least one type of maltreatment; Suicide attempt was reported by 10% of the cohort and self-mutilation (including banging head, hitting, cutting, hair pulling and burning) was reported by 20%. A significant relationship was found between ever having been maltreated and both attempting suicide and self-mutilation. Dissociation scores according to the Turkish version of the Dissociative Experiences Scale were significantly higher in maltreated children than non-maltreated children. [EL=3]

A case-control study (n = 352) undertaken in Australia examined the relationship between family functioning, sexual abuse and suicidal behaviour in children (aged 14 to 18, mean 15.2 years, 99 Caucasian) from a single high school.[112] The study found that 20 females (13.2%) and 9 males (4.5%) claimed to have been sexually abused. Of those who claimed to be abused: 24.1% had no suicidal behaviour, 13.8% had suicidal thoughts, 10.3% had made plans, 1% had self-harmed, 13.8% had made a single attempt, and 10% had made multiple attempts. Of non-abused – 32 (9.1%) thought of suicide, 16 had planned suicide, 15 had self-harmed, 20 had made a single attempt, and 16 (4.6%) had made multiple attempt. The study found that abused children (52.6%, 10) were more likely than non-abused (8.5%, 12) of 142 from dysfunctional families ($x2 = 24.1$, $p < 0.001$). In functional families with abuse the RR of suicidal behaviour was 7.1, in abused children in dysfunctional families the RR was 6.2, in abused children in dysfunction families the RR was 9.4 compared to normal children. The study concluded that sexual abuse was more important to suicidal behaviour than family dysfunction. [EL = 3]

A case-control study (n = 127) undertaken in the USA examined the correlates between child abuse (based on questionnaire responses) and risk of suicide in children (aged 12 to 18, mean 15.8; 38 males, 109 Caucasian) admitted to a psychiatric unit.[113] Group 1 were children who reported abuse based (on MACI abuse scale, n =74, aged 16.0 years) and those who reported depression (on DSM-III-R criteria and Beck depression scale, n = 53, aged 15.6 years). The study found no difference in reported suicidal behaviour 9.1 +/- 2.6 versus 8.3 +/- 2.6 between abused or not. The study found that self-criticism ($p = 0.02$) on depressive experience questionnaire for adolescents, alcohol abuse ($p = 0.02$) on alcohol abuse involvement scale and previous feelings or acts of violence ($p = 0.08$) on past feelings and acts of violence scale were associated with suicidal behaviour. The study concluded that abused children at risk of suicide report different psychological profiles from those who have not been abused. [EL = 2-]

A prospective cohort (n = 144) undertaken in the UK examined the relationship between sexual abuse and psychological disturbance in children (aged 16 or less, 75% females) where alleged or suspected sexual abuse had taken place.[114] All were investigated then followed-up at four weeks, nine months and two years. The study found that by 4-weeks there was no self-mutilation or suicide attempts (n = 99), by nine months there were five and five (n = 91), and by two years (n = 66) five and eight. The study found no significant change in the frequency of events over time. The study made no conclusions in relation to maltreatment and psychological problems, but highlighted that level of problems did not change with time. [EL = 3]

A retrospective case-series (n = 112) undertaken in Australia examined factors associated with repeat suicide attempts in adolescents (aged 13 to 20 years, 36 18.6 males, 76 17.5 females).[115] Multivariate analysis found that chronic medical conditions (OR = 3.29, [95%CI 1.11 to 9.78]) non-affective psychotic disorder (OR = 3.81, [95%CI 1.05 to 13.89]) alcohol abuse (OR = 3.56, [95%CI 1.02 to 12.42]), drug abuse (OR = 4.22, [95%CI 1.29 to 13.84]), but not sexual abuse (OR = 3.03 [95%CI 0.95 to 9.71]). The study concluded that a multidisciplinary approach was required to investigate and treat adolescents who have attempted suicide. The study further concluded that sexual abuse was likely to be underreported in the retrospective sample, so was likely to be a more important factor than the results suggest. [EL = 3]

A cross-sectional survey (n = 7241) undertaken in the USA examined the risk-factors associated with suicide amongst Navajo adolescents (average age 14.4 years) as part of a community survey.[116] Multiple regression analysis adjusted for age and gender found that physical abuse (OR = 1.9, 95%CI 1.5 to 2.4), sexual abuse (OR 1.5, 95%CI 1.2 to 1.9), female (OR = 1.7, 95%CI 1.4 to 2.0), Family history of suicidal behaviour (OR = 2.3, 95%CI 1.6 to 3.2), friend attempt (OR = 2.8, 95%CI 2.3 to 3.4), poor health (OR = 2.2, 95%CI 1.3 to 3.8), mental health problems requiring professional help (OR = 3.2, 95%CI 2.2 to 4.5), extreme alienation from family (OR = 3.2, 95%CI 2.1 to 4.4), and alcohol abuse (OR = 2.7, 95%CI 1.9 to 3.9) were all associated with suicide attempts. The study concluded that prevention of suicide need to target certain risk-factors. [EL = 3]

A cohort study (n = 659, 91% Caucasian) undertaken in the USA examined the relationship between childhood adversities and suicide attempts during late adolescent and early adulthood (average age 22 years) from a community sample of families surveyed at four times over 18 years.[117] The study reported that physical childhood abuse (16/587 versus 5/36 OR = 5.10, 95%CI 1.78 to 14.64) and sexual abuse (19/602 versus 4/21, OR = 7.22, 95%CI 2.22 to 23.53) controlling for age, sex, psychiatric symptoms, and parental psychiatric disorders. However, the study found significant relationships on a further 20 variables. The study found that the effects of childhood maltreatment and adversity were mediated by interpersonal problems during middle adolescence (OR 3.43, 95%CI 2.25 to 5.25 leads to Adjusted OR 6.78, 95%CI 2.77 to 16.6 [20 who reported suicide attempt 87% of total) direct Adjusted OR = 2.46 95%CI 0.95 to 6.33). The study concluded that maladaptive parenting and childhood maltreatment may be associated with severe interpersonal difficulties during adolescences. [EL = 3]

A case-control study (n = 664) undertaken in Canada examined the relationship between sexual abuse and delinquent and self-destructive behaviour in girls.[118] Three groups were compared: group 1 (n = 140) had a mean age of 14.8 years who had recently disclosed sexual abuse to authorities, group 2 (n = 94) had a mean age of 15.05 years who reported sexual abuse in a survey, and group 3 (n = 430) had a mean age of 14.97 year and had not reported sexual abuse. The study found that victims of sexual abuse were more likely than non-abused to report: self mutilation ($p < 0.001$), eating disorders ($p < 0.001$, resist help and dangerous acting out). Those that had reported abuse were less significant. to open veins (OR= 4.96 $p < 0.01$ vs. 1.27), bang head (1.73 vs. 1.07), refuse medication (1.94 vs. 0.56), don't ask for help (1.72 vs. 0.72), refusing to eat (2.08 vs. 0.86), daredevil behaviour (1.72 vs. 0.96), and self-vomiting (2.24 vs. 1.30) ($p < 0.01$),scratch till bleed (1.29 vs. 0.44 $p<0.01$, but not burn skin, punch walls, throw self from vehicle, cut self, strangle self, swallow poison, hit/prick self, use laxatives. The study examined the family structure correlates for maltreatment and a model containing family adversity, economic problems, violence during abuse, relation with mother and depression explained 48% of variance of self-injury. The study reported significant differences between abused and non-abused children. [EL = 2-]

A cross-sectional survey (n = 661 males and 1323 females) undertaken in the USA examined the risk-factors for attempting suicide amongst Alaska Native Youth (aged 12 to 18) who responded to a survey that they had attempted suicide.[119] The study found that sexual abuse was linked to attempted suicide in males (OR = 2.17 [95%CI 1.39 to 3.39]) and females (OR = 1.46 [95%CI 1.21 to 1.77]). The study found that physical abuse was link to attempted suicide in males (OR = 1.60 [95%CI 1.16 to 2.19]) and

females girls (OR = 1.73 [95%CI 1.44 to 2.08]). However, age, substance misuse, friend or family suicide, mental health and family structure were also found to relate to suicide. A history of suicide attempts associated with risk and protective factors. [EL = 3]

A cohort study (n = 3017) undertaken in Canada examined the correlates with suicide attempts.[120] Surveys were undertaken at three points in the individual's life - aged six to 12 years, then 15 to 18 years, then 19 to 24 years. The study included a random selection of 2000 (999 females) children and a second sample of 1017 (424 females) children who showed disruptive behaviour. Multiple regression analysis identified sexual abuse (OR 1.295%CI 1.1 to 1.3) as being linked with suicide attempts. However, persistent ideation, insecure attachment, disruptive disorders, female gender were also significant. Physical abuse was non-significant on univariate analysis so not included in model. A regression model stratified by gender found that sexual abuse was significant for suicide attempts in females (OR 95%CI 1.06 to 1.41) but not males, and that different sets of variables were related to suicidal ideation in both groups. Study concluded that suicide ideation changes with persistence of ideation and gender. [EL = 3]

A cohort (n = 112) undertaken in Australia examined factors associated with repeat suicide attempt over a 12 month period after admission for a suicide attempt in adolescents (36 males mean age 18.6 years, 76 females mean age 17.5 years).[115] The study found that sexual abuse (adjusted OR 3.03 [95%CI 0.95 to 9.71]) was not significant (p = 0.06), but that chronic medical condition, non-affective psychotic disorder, alcohol abuse, and drug abuse were significant at 0.05 level. The study did not investigate other types of maltreatment. Gender, occupation, and living conditions and prior attempts were also non-significant. The study concluded that the factors it had identified should be assessed in adolescents who attempt suicide in case of repeat attempts, and that sexual abuse and chronic illness should also be taken into account. [EL = 3]

A case-control study (n = 134) undertaken in the USA examined the familial risk factors for suicide in adolescents.[121] Two groups were assessed: group 1 (n = 67, mean age 17 years, 95% Caucasian and 85% male) were adolescents who had committed suicide, relatives of whom were interviewed; group 2 (n = 67) were randomly identified demographically matched adolescents. The study found that physical abuse within past year (p = 0.06) and physical abuse before past year (p < 0.01) were associated with suicide. Sexual abuse was non-significantly related to suicide. Parent-child conflict, parental unemployment, parent somatic illness, parent legal trouble, and move from neighbourhood, and parental mental disorders. A multiple regression model showed that family history of depression, family history of substance abuse and lifetime history of parent-child discord were significantly related to suicide. The study concluded that children of depressives and/or substance abusers should be screened for suicidal behaviour. However, the study is based on relatives' recall and this is liable to bias. (1994) [EL = 2-]

### Additional evidence

In addition to the evidence on the relationship between maltreatment and self-harm in children there is a larger body of work examining the long-term impact of maltreatment in adults. This evidence has not been reviewed here, but points to a relationship between childhood maltreatment, particularly sexual abuse, and later self-harm (suicide, self-destructive behaviour and self-harm).

### Evidence statement

Evidence from 16 studies found a statistical link (p < 0.05) between sexual abuse and suicidal behaviour compared to five studies that showed no association. Evidence from 10 studies found a statistical link (p < 0.05) between physical abuse and suicidal behaviour compared to 5 studies that found no association. Evidence from four studies showed a statistical link (p < 0.05) between sexual abuse and self-harm compared to one that did not, and two studies found a statistical link (p < 0.05) between sexual abuse and self-destructive behaviour. Evidence from two studies found a statistical link (p < 0.05) between physical abuse and self-harm compared to two that did not and one study found a link between physical abuse and self-destructive behaviour. Few studies examined emotional abuse or neglect.

There were general problems in the research due to self-reporting of maltreatment (28 of 31 studies) and vary definitions used for maltreatment and self-harm. This makes comparison of studies and reporting of figures unreliable.

In addition, maltreatment is usually found in association with a set of other personal, familial and wider social problems. Therefore, the casual pathway of any statistical association may not be direct.

#### GDG considerations

While many activities undertaken by children and young people may be harmful (eg. ingesting alcohol or illicit drugs), the GDG believes it important to focus on the issue of intent to harm the self and for healthcare professionals to be alert to the deliberate nature of self-harm in some children and young people and its link to child maltreatment. The GDG wishes to raise awareness of the clinical evidence for pre-teenage children to present with deliberate self-harm even though traditionally such behaviour might be thought restricted to teenagers.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendation

Healthcare professionals should consider[1] past or current maltreatment, particularly sexual, physical or emotional abuse, as a reason for deliberate self-harm in a child or young person, including cutting, scratching, picking, biting or tearing skin to cause injury, taking prescribed or non-prescribed medications at higher than therapeutic doses when the intention is self-harm, pulling out hair or eyelashes.

#### Research recommendation

Further research is needed on the link between emotional abuse and neglect, including emotional neglect, and deliberate self-harm.

### 7.2.2 Repeated nightmares in the absence of an obvious cause

Nightmares are different from night terrors. Night terrors are similar to sleep-walking, in that the child is unable to recollect the experience after waking. When a child wakes from a nightmare they can be comforted, but children who undergo night terrors cannot be comforted during the terror period. There was no literature search on night terrors.

#### Overview of available evidence

No suitable published literature was identified in relation to the question of whether repeated nightmares in the absence of an obvious cause are a reason to suspect child maltreatment. However, presence or absence of nightmares is an item on the Child Behaviour Checklist, so there are some studies that mention nightmares in relation to maltreatment but were not designed to answer the question.

#### GDG considerations

The GDG believes that nightmares can be caused by abuse by commission, not omission. The GDG believes that, while night terrors are common in children, any link with preceding disturbing events is too unclear to be used in this guidance. Nightmares can be distinguished from night terrors, even in children who are too young to communicate, because with nightmares, it is possible for the parent or carer to comfort the child.

Children who are having repeated nightmares but when there is no obvious non-abusive stressor (such as bullying at school or parental divorce) should be assessed to ascertain the nature of the disturbance causing the nightmares. The themes of the nightmares might be elicited but the GDG warns against dream interpretation.

The GDG believes that the occurrence of nightmares in relation to abuse relates to a change in behaviour and the recommendation on this topic appears in that context (see section 7.1 emotional and behavioural states).

[1] Please refer to p35 for the definition of ‘consider’ and its associated actions.

### 7.2.3 Abdominal pain

Chronic abdominal pain, often referred to as recurrent abdominal pain, is a common disorder, which affects between 0.5% and 19% of children and adolescents worldwide.[122] In children, it has been defined in the past as pain that waxes and wanes, occurs for at least three episodes within three months and is severe enough to affect the child's activities. More recently the term 'childhood chronic abdominal pain' has been preferred and although the disorder has been divided into five well-defined categories (functional dyspepsia, irritable bowel syndrome, functional abdominal pain, functional abdominal pain syndrome and abdominal migraine), it is suggested that further research is still needed in this area.

Children with chronic abdominal pain represent a heterogeneous population comprising both organic and functional gastrointestinal disorders.[122] Currently, there is little known about an association between maltreatment and chronic abdominal pain in children.

#### Narrative summary

One case-control study was found that reports the differences in somatic and emotional reactions of girls who have reported sexual abuse and those who have not.[123] [EL=2-] Seventy two children who had attended a referral centre for sexual abuse were identified for inclusion in the study and controls, of similar age and initial clinic visit date and no history of physical abuse were selected from admission records to a general clinic. Data were extracted from medical records on a number of reported symptoms including gastrointestinal irritability and chronic abdominal pain. Children who had been sexually abused were more likely to have reported chronic abdominal pain than controls ($p<0.01$).

#### GDG considerations

The GDG did not identify a good evidence base for whether a history of recurrent abdominal pain is a reason to suspect child maltreatment. The GDG believes that, in the absence of an obvious medical cause, recurrent abdominal pain can be caused by emotional disturbances resulting from child maltreatment and therefore should be a reason to consider maltreatment and should prompt further questions.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendation

Healthcare professionals should consider child maltreatment when a child has recurrent abdominal pain in the absence of a medical cause or other stressor unrelated to maltreatment, for example illness in the family, parental separation etc.

### 7.2.4 Disturbances in eating and feeding behaviour

There is a large literature on the possible association between child abuse, particularly sexual abuse, and eating disorders in adults. Apart from anorexia nervosa and bulimia nervosa, this search encompassed behaviours associated with food such as hoarding, hiding and stealing food, binging, pica and disturbed feeding patterns. These behaviours are thought to be associated with different types of maltreatment. Onset of bulimia and anorexia is complicated and its possible relationship with child abuse is further complicated by a number of mediating factors.

#### Overview of available evidence

Five studies were identified that looked at disordered eating in association with maltreatment. No suitable published literature was identified that looked specifically at hoarding or stealing behaviours.

#### Narrative summary

A USA-based case-control study (n=40, age 10-15 years) investigated whether sexually abused (defined as unwanted sexual activity or sexual activity that involved a person more than 5 years older) girls in treatment for abuse showed more eating disorder behaviours than non-abused girls and whether multiple

Please refer to p35 for the definition of 'consider' and its associated actions

forms of abuse increased severity of eating disturbance.[125] Girls in both groups were asked to fill in the Childhood Trauma Questionnaire (CTQ), the Body Rating Scale for Adolescents, the McKnight Risk Factor Survey and the Kids' Eating Disorder Survey (KEDS). Fifteen items were reported on and the sexually abused girls had significantly greater weight dissatisfaction, reported eating less when they were bored, upset or trying to feel better about themselves, had a lower score on perfectionism and chose a thinner figure that represented how they would like to look than non-abused girls. [EL=2-]

A number of studies in this area have arisen out of a large US survey of secondary school students in Minnesota conducted in 1987. The first paper reviewed here selected females who reported that they had ever been sexually abused and had discussed the problem with someone (n=1011, mean age 15.28).[126] They were compared to a group selected randomly from the survey cohort who had not been sexually abused according to the survey questions (n=1011, 14.92). Prevalence of evaluating oneself as overweight (55.6 vs 43.7%), binge-eating (40.3% vs 31.7%), non-stop eating (24.6% vs 16.7%), more than ten dieting episodes in the preceding year (17.9% vs 12.3%), self-induced vomiting more than once a week (4.4% vs 2.7%), use of diuretics (4.4% vs 2.7%) and use of laxatives (3.7% vs 2.2%) was found to be significantly higher in the girls who reported abuse than those who did not. [EL=3]

A 10% subsample (n=6224) from the Minnesota study was used to investigate associations between abuse history and disordered eating in 9$^{th}$ and 12$^{th}$ graders only.[127] Adolescents were said to have disordered eating if they reported two of out-of-control eating, using laxatives and vomiting. There were 318 females and 84 males who met these criteria and reported at least one type of abuse. Some participants reported more than one type of abuse but this was not accounted for in the analysis. Approximately twice as many abused females had disordered eating than non-abused females; in males, approximately ten times as many had disordered eating in the abused group compared to the non-abused group. [EL=3]

Another study compared eating behaviours and weight perception of males (n=370, mean age 15.26, sd 1.7) and females (n=2681, mean age 15.37, sd 1.7) who reported past sexual abuse (defined as "someone in your family, or someone else, touches you in a place you did not want to be touched, or does something to you sexually which they shouldn't have done").[128] More abused girls than boys thought of themselves as overweight (52% vs 21%), reported binge-eating episodes (41% vs 22%), reported being afraid to not being able to stop eating (23% vs 8%), had dieted in the preceding year (70% vs 27%), had induced vomiting in themselves (20% vs 10%) and had used diuretics to lose weight (3.7% vs 1.4%). More boys than girls were satisfied with their body weight and proud of their body. There were no significant differences between males and females in the use of laxatives (1.6% vs 3%) and ipecac (1.4% vs 1.1%). [EL=2-]

Another large survey of adolescent females in the USA (n=7903, mean age 14.5 years, SD 1.56) investigated whether increasing numbers of episodes of physical or sexual abuse led to increasing numbers of purging episodes.[129] The study found an association between physical abuse and purging behaviour (OR=1.81, p=0.0014) after adjusting for some confounders but found no relationship between sexual abuse and purging behaviour. [EL=3]

### Evidence statement

A number of surveys have investigated eating behaviours and attitudes to body weight and their relationship with maltreatment. The studies are generally of poor quality but suggest that children who have been maltreated reported more binging than those who had not.

### GDG considerations

There is a range of disturbance in eating behaviour in children which includes hoarding, hiding and stealing food, binging, pica and disturbed feeding patterns. It is the GDG's view that these can be associated with various forms of maltreatment because they may be a manifestation of underlying distress; or a lack of physical and emotional nurturing; or disturbed parent- child interactions focussed around feeding. The GDG is also of the view that eating disorders, seen more commonly in older children and adolescents, which include anorexia nervosa, bulimia and obesity, may also be associated with a past history of maltreatment. The strength of association varies according to the type of disorder. The GDG chose not to make a recommendation about eating disorders in relation to current abuse.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should suspect child maltreatment in children who scavenge, steal, hoard or hide food in the absence of medical causes.

### 7.2.5 Selective mutism (elective mutism)

Selective (sometimes known as elective) mutism is where a person is capable of speaking but refuses to in particular situations. It is thought to be brought on by psychological trauma and is uncommon.

A small case-control study (n=18 in each group) identified children who were selectively mute at school for at least 1 year and compared their maltreatment status with controls matched on age and sex from the same school class.[130] The two control groups were children with speech or language problems and children with no speech or language problems. There were five definite abuse cases in the selectively mute children and three possible abuse cases; there was one possible abuse case in the group with speech or language problems and no abuse, either definite or suspected, in the normal controls. [EL=2-]

#### GDG considerations

There is a paucity of evidence about the association between maltreatment and selective mutism, compounded by the fact that the children will, by definition, have difficulty in describing any maltreatment which they are experiencing. However, based additionally on clinical experience, the GDG believes that the possibility of maltreatment as a precursor for selective mutism needs to be considered.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

**Recommendations**

Healthcare professionals should consider child maltreatment when a child presents with selective mutism.

### 7.2.6 Head-banging and body rocking

Head-banging and body rocking are sometimes referred to as stereotypical behaviours. They are considered to be a form of behaviour in which the child soothes itself by performing a repetitive action.

#### Overview of available evidence

One cross-sectional study was identified.

#### Narrative summary

A German study of children (n=140, aged 10 months to 11 years) in residential care homes asked caregivers to rate the occurrence of 15 stereotyped behaviours in non-handicapped children in their care.[131] [EL=2-] Of the children included in the study, 45 had a history of suspected child abuse; this is not defined in the paper. In the questionnaire, caregivers were asked to rate how often each child performed each behaviour. The results cited are based on daily occurrences. Body rocking was observed in 11.1% of suspected abuse cases and 6.3% of the remaining children, head nodding or shaking was observed in 4.4% of the suspected abuse cases and 4.2% of the remaining children and head-banging was observed in 4.4% of the suspected abuse cases and 1.1% in the other children. None of these proportions were significantly different between groups. This result could be due to the reasons that the children are in residential care.

#### Evidence statement

The retrieved study indicates that head-banging and rocking are uncommon behaviours in children who have a history of suspected abuse and are no longer living with their families.

Please refer to pp33-4 for definitions of ‘consider’ and ‘suspect’ and their associated actions

### Delphi consensus (see also Appendix C)

The lack of literature in this subject caused the GDG to seek external validation for their opinions. The following statement on body rocking was put into the Delphi survey:

| Statement number | Round 1 | % agreed | n | Outcome |
|---|---|---|---|---|
| 37a | Healthcare professionals should consider emotional neglect if a child displays habitual body rocking in the absence of medical causes or neurodevelopmental disorders. | 79 | 92 | Statement accepted. |

The following statement on head-banging was drafted.

| Statement numbers | Round 2 | % agreed | n | Outcome |
|---|---|---|---|---|
| 38a | Healthcare professionals should consider child maltreatment when a child shows habitual head-banging in the absence of a medical cause or other definable stressor. | 54 | 78 | Statement rejected because responses were diffuse. |

### GDG considerations

The GDG believes that body rocking is associated with emotional neglect and that it is a sign of inadequate stimulation. Body rocking is common in children and young people with learning disabilities, and while it is important to exclude neuro-developmental disorders as the cause of the rocking, it is imperative to recognise that abuse may be the cause. The GDG sought the opinions of the Delphi panel on statement 37a about body rocking and sufficient agreement was reached (see above and section C.2.3).

Habitual head-banging can be distinguished from that associated with an outburst of anger. While habitual head-banging is a relatively uncommon clinical finding, there is no general prevalence data. The data linking it with child maltreatment is weak. Therefore, the GDG, having sought the opinion of the Delphi panel, chose not to make a recommendation about head-banging (see above and section C.2.8).

### Recommendations

Healthcare professionals should consider emotional neglect if a child displays habitual body rocking in the absence of medical causes or neuro-developmental disorders.

## 7.2.7 Wetting and soiling

Enuresis or wetting is involuntary voiding of the bladder beyond an age at which bladder control is expected. The Diagnostic and Statistical Manual for Mental Disorders (DSM-IV: American Psychiatric Association, 1995) uses the term enuresis for the repeated voiding of urine into clothing, occurring at least twice a week, for at least three consecutive months, in children over 5 years of age in the absence of congenital or acquired defects of the central nervous system. Many children have less frequent episodes of bedwetting and/or daytime urinary incontinence that normally decrease in frequency with increasing age. Parents or carers respond to episodes of wetting in a variety of ways.

Bedwetting is considered primary when bladder control has never been attained. Primary nocturnal enuresis is more common in boys. Bedwetting at least twice a week is found in 2.5 to 10% of seven-year-old children[132] declining to 0.5% in adults.[133]

Enuresis is considered secondary when incontinence reoccurs after at least six months of continence. Medical causes include urinary tract infection and neurological disorders. It is thought that emotional upset due to parental separation or illness, bullying at school or sexual abuse may also cause secondary nocturnal enuresis.

Daytime wetting is more common in girls than in boys and can be caused by a heterogeneous group of urological disorders associated with bladder instability. Daytime wetting has been found to have occurred more than once a week in 3% of girls with the mean age of 5.9 years.( ref I'll have to find it) Voluntary wetting is not common. It is associated with such psychiatric disorders as oppositional

Please refer to p35 for the definition of 'consider' and its associated actions

defiant disorder, and is substantially different from ordinary nighttime bed-wetting. Voluntary enuresis is always secondary.

### Narrative summary

A case series of sexually abused children (n=428, 84% female, mean age 8.6 years, range 1-16) documented genital symptoms and signs at a follow-up visit to a specialist sexual assault centre.[34] Of the total sample, 85 children (20%) had symptoms. These were vaginal pain (n=43), dysuria (n=21), increased urinary frequency (n=20) and recent onset of daytime or night time enuresis (n=24). [EL=3]

## Soiling, smearing and encopresis

Constipation, soiling, smearing and encopresis are complex issues. For the purposes of this document, soiling is defined as defecation in an inappropriate place and encopresis as deliberate defecation of a normal stool in an inappropriate place.

### Narrative summary

As part of a validation study for the CSBI, one paper reports on the value of encopresis (defined as a response of "sometimes true" or "often true" to the "bowel motion outside the toilet" item on the CBCL) in determining whether a child has been sexually abused.[134] Normative (n=1114), psychiatric (n=577) and abused (n=620) children and their primary female caregiver were recruited to the study. In a total of 1536 children (aged 2-12 years), the sensitivity of encopresis to predict CSA was 10% and the positive predictive value was 45%. The positive predictive value ranged from 27% in 10-12 year old boys to 80% in 10-12 year old girls. Note that the positive predictive value depends on the prevalence of abuse in the population being studied. [EL=2+]

### GDG considerations

Wetting disorders are heterogeneous, common and encompass a wide range of underlying medical disorders. Psychological stressors including the stresses associated with maltreatment are possible causes of secondary forms of wetting. The GDG believes that it is also important to consider the role of parents or carers in training children to be continent (cross reference neglect), the parents' or carers' response to episodes of wetting (emotional abuse) and the extent to which parents/carers have engaged with treatment programmes for children with primary enuresis.

Soiling is the passage of faeces into inappropriate places at a stage in the child's development when this would not be expected to occur. The association between soiling, constipation and maltreatment is complex. The GDG is of the opinion that where the act is clearly perceived to be deliberate (encopresis) on the part of the child there is an association with maltreatment. The GDG also agrees that where constipation is associated with soiling it is more difficult to define a clear link with maltreatment. Cases where soiling persists despite determined efforts to treat attract greater concern regarding possible underlying maltreatment. Poor treatment compliance is considered in section 5.1 (general features of neglect).

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

### Recommendations

Healthcare professionals should consider child maltreatment in a child who has secondary day or night time wetting in the absence of medical causes (for example urinary tract infections), clearly identified psychosocial stressors (for example a death in the family, parental separation) which persists despite compliance with adequate management.

Healthcare professionals should consider child maltreatment in a child who is reported to be deliberately wetting.

Healthcare professionals should consider child maltreatment when there is a persistent punitive parental response to wetting against professional advice that the symptom is involuntary.

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Please refer to p35 for the definition of 'consider' and its associated actions

Healthcare professionals should consider child maltreatment in children showing encopresis (persistently defecating a normal stool in an inappropriate place) or persistent, deliberate smearing.

### 7.2.8 Sexualised behaviour

In this review, we sought to establish whether children who had been sexually abused showed more sexualised behaviours than non-cases. Many children display some sexualised behaviours so it is important for a healthcare professional to be able to ascertain whether observed or described sexualised behaviours are appropriate for the child's age and developmental stage. Community-based studies have investigated which behaviours are commonly observed.[135;136] In pre-school children, it is not uncommon to observe children touching their own genitalia, attempting to touch a woman's breasts, looking at another child's genitalia and showing their own genitalia.[135] Behaviours that are rarely or never observed include touching another person's genitalia, asking for genitalia to be touched, inserting a finger or penis into another person's vagina or anus and having oral contact with another person's or a doll's genital area.[135] A number of validated tools are sometimes used for evaluating sexual behaviours in children, for example the Child Sexual Behaviour Inventory (CSBI).[137]

#### Narrative summary

One systematic review pooled comparative data on the effects of CSA[74], acknowledging that source materials were heterogeneous. This review found eight studies which compared sexualised behaviours in sexually abused children and controls from the community. In all eight studies, sexually abused children showed more sexualised behaviour than the children who had not been sexually abused. [EL=2-]

One descriptive systematic review on the sexual abuse of boys[77] concluded that abused males (aged under 19 years) showed more sexualised behaviours, such as difficulty controlling sexual feelings, hypersexuality, coercive behaviour towards others, engagement in prostitution and unprotected sexual intercourse, than non-abused boys. [EL=2-]

A comparative study of girls who were being treated after sexual abuse[138] within a 2 year period of reporting abuse reported scores on the CSBI in 20 CSA cases, 20 psychiatric controls and 20 non-psychiatric controls. Mean (standard deviation) CBSI scores were found to be 30.6 (20.3), 15.2 (9.9) and 10.8 (9.6) respectively and the groups were found to be significantly different. [EL=2+]

A retrospective study matched children who had been sexually abused (n=22, 13 girls, age 2 – 7 years) with controls recruited from a paediatric practice and a public health centre.[139] The children were interviewed with a questionnaire about sexual knowledge. No differences were found in the sexual knowledge of the two groups. [EL=2]

One case control study compared children (n=17, age 5 – 15 years), who had been sexually abused and were protected from the perpetrator at the time of investigation with a group of controls (n=17) matched on age, sex, socioeconomic status and current living situation (single parent, divorced parents etc).[140] A number of validated questionnaires were applied to all children in the study or their caregivers as appropriate, including the child behaviour checklist (CBCL), on which the six sex problem items were combined to give a sex problem score. On this measure, the abused children scored higher than the controls (p=0.05). In the abused group, the alleged abuse had happened within the year prior to the study and a wide range of abuses was reported. [EL=2-]

A longitudinal survey of children who had either been maltreated early in life or were at risk of early maltreatment investigated the effects of maltreatment other than sexual abuse on sexualised behaviours (n=690, children approximately 8 years old at data collection, 53% male).[141] A modified version of the CSBI was used to measure sexualised behaviours; maltreatment reports to child protective services were classified as early if they occurred before age 4 and late if they occurred between age 4 and the time of the survey. Children who had reports of sexual abuse were excluded Late physical abuse was associated with boundary problems (OR=1.9, 95% CI 1.1-3.5), displaying private parts (OR=2.4, 95% CI 1.0-5.6) and sexual intrusiveness (OR=2.6, 95% CI 1.3-5.2). Late emotional abuse was associated with sexual knowledge (OR=2.0, 95% CI 1.2-3.4). Early physical abuse was associated with displaying private parts (OR=2.4, 95% CI 1.1-5.4). Early emotional abuse was protective against displaying private parts (OR= 0.3, 95% CI 0.1-0.8) and early neglect was protective against sexual intrusiveness (OR=0.4, 95% CI 0.2-0.9). There was no normative sample in this study. [EL=2-]

A survey of sexually active African-American females (n=725, mean age 16.6 years, sd. 1.6) attending an adolescent primary care and prevention clinic investigated associations between reports of sexual abuse and attitudes towards condom use.[142] Participants were asked if they had ever been sexually abused or molested and at what age. Those who said they had (n=167) reported a greater number of sexual partners in their lifetime (6.5 vs 4.4, $p<0.05$) and a greater frequency of unprotected vaginal sex in the preceding 90 days (5.7 vs 4.5, $p<0.05$) than those who had not (n=558). There were no differences between the groups in frequency of protected vaginal sex in the preceding 90 days or condom use consistency. [EL=2-]

#### Evidence statement

The comparative studies cited here show that, for the most part, sexualised behaviour occurs more often in children who have been sexually abused than those who have not. One small study showed that sexual knowledge did not differ between the two groups.

#### GDG considerations

Based on the GDG's clinical experience and studies of normative behaviour, the GDG believes that certain sexualised behaviours that are uncommonly encountered are a cause for concern and that the explanation of the behaviours should be sought; sexualised behaviours can be associated with sexual exposure, which may be a part of sexual grooming behaviour or contact sexual abuse, both of which form the definition of sexual abuse adopted in this document (see section 3.2 definitions of child maltreatment).

The GDG believes that sexualised behaviours as a result of maltreatment become different in nature as children move into adolescence; these include promiscuity, sexually precocious behaviour and risk-taking sexual behaviours. Risk-taking sexual behaviours may be recognised as such or their results come to light when a child or young person has an STI or is pregnant (see section 4.2.3 sexually transmitted infections and section 4.2.4 pregnancy). The GDG's clinical experience is that sexual behaviours due to maltreatment are often resistant to limits or distractions set by the parent/s or carer/s. However, difficulties in the autism spectrum should be taken into account.

The GDG believes that children and young people involved in prostitution and sexual exploitation are in need of protection but recognises that the decision to initiate child protection proceedings should not compromise the health of the person.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

#### Recommendations

Healthcare professionals should suspect child maltreatment, particularly sexual abuse, when a pre-pubertal child displays or is reported to display repeated, coercive or persistent sexualised behaviours or preoccupation, such as sexual talk associated with knowledge, drawing genitalia, masturbation, emulating sexual activity.

Healthcare professionals should suspect a history of past or present maltreatment when a child or young person's sexual behaviour is indiscriminate, precocious or coercive.

Healthcare professionals should suspect sexual abuse when a pre-pubertal child displays or is reported to display unusual sexualised behaviours, including but not restricted to:

- oral-genital contact with another child or a doll
- requesting to be touched in the genital area
- inserting or attempting to insert an object, finger or penis into another child's vagina or anus.

### 7.2.9 Runaway behaviour

Children or young persons who run away from their home are, by definition, distancing themselves actively from something they perceive to be unpleasant. Maltreatment, including sexual, physical and

Please refer to pp33-34 for the definition of 'suspect' and its associated actions

emotional abuse is foremost amongst causes. A child or young person might also run *to* something e.g. a promised relationship. However, this would suggest difficulties in the relationship between the child and their primary caregivers if done without the caregivers' permission. British government guidance on children missing from care and from home is due to be updated in early 2009.

### Overview of available evidence

A number of surveys of homeless and runaway youth were identified. Given the low quality of the evidence, a small number of studies have been reviewed in detail and some others have been presented in table 7.2.

| Study | number of participants | percentage maltreated | sample | age at interview |
|---|---|---|---|---|
| Powers (1990)[143] and Powers (1988)[144] | 223 | Sexual abuse: 13%<br>Physical abuse: 42%<br>Neglect: 43% | young people who sought services from runaway and youth homeless services in New York State: 49% runaways, 17% homeless, 13% considering running, 21% in crisis but not on the run | |
| Stiffman(1989)[145] | 291 | History of physical or sexual abuse: 48% | Youth who sought shelter at one of two homes for runaway youth | 12-18 years |
| Gary (1996)[146], Warren (1997)[147] and Warren (1994)[148] | 69 (number who gave information about abuse) | Physical: 29%<br>Sexual: 14%<br>Emotional: 1%<br>Combination: 17%<br>Any: 62% | Convenience sample who had been admitted to referral shelter for runaway youth | Mean age: 15 years (range 11-17) |
| Thompson (2004)[149] | 156 | Physical: 35%<br>Sexual: 12%<br>Emotional: 30%<br>Neglect: 29% | Consecutive entrants to shelter for runaway youth (recorded up to 48 hours after admission) | mean age: 16 years (sd 1.5) |
| Kufeldt (1987)[150] | 474 | Physical: 28%<br>Sexual: 7% | Night time Interviews of young people on the street | Mean age ~15 years<br>(all people interviewed<18) |
| Feitel (1992)[151] | 150 (different numbers responded to different questions) | Fear of being hit: 55%<br>Being badly beaten: 68%<br>Being sexually molested: 25% | Clients of youth shelter. | Mean age: 18.45 years (range 13 to 22) |

**Table 7.2** Surveys of homeless and runaway youth identified

In a USA study of homeless female adolescents (n=216, mean age 17.7 years, range 13-20 years), sexual abuse (defined as prepubertal sexual contact with an older person) was reported by 38% of study participants.[152] Mean age of the first incident of abuse was 6.7 years (sd 2.9 years) and mean age of becoming homeless was 14.3 years (sd 2.5 years).

A survey of homeless and runaway youth (n=372, median age 17 years, range 13 to 21 years) found that 47% of responders (n=326) had been physically abused before they left home and 29% of responders had been sexually abused.[153] There was no difference between males and females in the rates of physical abuse, but more females than males had been sexually abused.

A survey of runaways at a shelter (n=187, median age 18 years, range 16 to 21 years) reported the reasons why the young people had left home for the first time and the most recent time.[154] Respondents were asked to rate a list of given reasons using a Likert-like scale of importance. Reasons for leaving home the first time were rated as somewhat important, important or very important were physical abuse (40%), sexual abuse (12%), being thrown out (38%), conflict with a male adult (57%), conflict with a male adult (57%) and feeling unloved (56%). 74% of the people surveyed had run away from home more than once; the important reasons for running the most recent time was physical abuse (33%),

sexual abuse (9%), being thrown out (55%), conflict with a male adult (56%), conflict with a female adult (55%), feeling unloved (48%). The median age of onset of physical abuse was reported to be 12 years or younger. [EL=3]

#### Evidence statement

A number of surveys of young people who are either homeless or have run away from home indicate that up to 62% have suffered some form of abuse in the past. Definitions of homelessness and runaway behaviour differ between studies; maltreatment is measured in different ways and is not substantiated in any of the studies. Many studies asked questions about physical or sexual abuse but few reported on neglect or emotional abuse.

#### GDG considerations

Many of the reasons given by children and young people for leaving home are to do with negative atmosphere in the home; either conflict, abuse or fear of conflict or abuse. . Although the literature does not indicate clearly that young people who exhibit runaway behaviour are currently in need of protection, the GDG is of the opinion that running away from home implies that the young person perceives the home to be a place that is unsafe or intolerable. The GDG believes that it is important to establish whether parental consent has been given if a child or young person is found not to be living at home, but notes that maltreatment is less of a concern in 16 and 17 year olds. Refer to national guidelines on runaways.

There was consensus within the GDG about the recommendation in this section so the views of the Delphi panel were not sought.

#### Recommendations

Healthcare professionals should consider child maltreatment if a child or young person has run away from home or care, or is living in alternative accommodation without the full agreement of the parent/s or carer/s.

### 7.2.10 Dissociation

Dissociation is a transient state in which the child (or adult) becomes detached from current, conscious interaction not under voluntary control. Dissociation is associated with past trauma including child abuse. It is often brought about by an emotional need to avoid awareness of distressing or traumatic memories or thoughts and is associated with past trauma including child abuse.

#### Overview of available evidence

Out of 21 retrieved papers, 8 papers were found to be suitable for inclusion and addressed the question is to whether dissociation is a reason to suspect maltreatment.[155-162]

The eight included papers comprised of one prospective longitudinal study [evidence level 2+], six case–control series [evidence level 2-] and one questionnaire validation study [evidence level 2-]. Six of the studies were from the USA and one each from Canada and Sweden. All but two of the studies recruited the participants from specialised setting e.g. social services, child maltreatment clinic and many of participants in these studies were from low socioeconomic groups. The Child Dissociative Checklist (CDC) and the Adolescent Dissociation Experiences ADE scales were the most frequently used, although in the majority of the studies, the primary outcome was not to determine an association between child maltreatment and the clinical feature of dissociation. The most frequent types of maltreatment investigated by these studies were sexual and physical maltreatment usually both separately and together. Neglect was investigated in two studies.

#### Narrative summary

In a prospective longitudinal study, 585 children were randomly recruited from two cohorts starting at kindergarten in 1987 and 1988 in three public schools in the USA.[155] [evidence level 2+] On recruitment, the developmental history of the child was taken by an interviewer (no details) in the

Please refer to p35 for the definition of ‘consider’ and its associated actions

family home and included details on child misbehaviour and discipline practices. At this point, the interviewer rated whether physical maltreatment had occurred or not. The follow up for presence of dissociation symptoms was assessed in the 11th grade at school by the mothers completing the Child Behaviour Checklist (CDC) and the child completing the Youth Self-report Form of the CDC. Both unadjusted and adjusted for covariates analysis showed a statistically significant association with suspected child physical maltreatment and dissociation later in school life. Covariate adjusted analysis of parental CDC report was: not maltreated 1.58 SD 0.16 versus maltreated 2.8 SD 0.37 (F=10.01, P<0.01).

In a case-control series, 198 pre school children (mean age 5.5 years SD 0.5) were recruited from families who had been referred to social services in the USA.[156] [evidence level 2-] The children were classified as physical, sexual, neglected and no maltreatment (no numbers given per group) by social services records. The main outcome measure was the CDC and it was shown that there was statistically significant overall effect for maltreatment subtypes on dissociation (p<0.00001). All clinical groups (mean CDC values, no SD given were physical abuse 8.91, sexual abuse 7.27, neglected group 5.52) demonstrated greater dissociation than the non-maltreated group (p<0.001 for all). Further sub-analysis shown that between the three maltreatment groups, physical abuse and neglect was significantly related to dissociation (p<0.001) but sexual abuse was not (P>0.1).

In a case-control series of 114 children and adolescents (age range 10-18 years) that were recruited from social services in the USA and classified as no maltreatment (n=27) sexual maltreatment (n=25), physical maltreatment (n=18) or sexual and physical maltreatment (n=44) were assessed using the Adolescent Dissociative Experience (ADE) scale or the CDC scale according to age.[157] [evidence level 2-] Results from the ADE scale showed that children with sexual abuse reported significantly higher levels of dissociation (mean scores); no abuse 2.4 SD 4.7, sexual abuse 3.4 SD 2.6, physical abuse 2.4 SD 1.8, sexual and physical abuse 3.7 SD 2.1 (p<0.01). Results from the CDC scale showed that children with a history of sexual and physical abuse had higher levels of 'perceived' dissociation (mean scores): no abuse 4.7 SD 2.0, sexual abuse 6.0 SD 4.8, physical abuse 6.2 SD 6.1, sexual and physical abuse 10.4 SD 6.9 (p<0.05).

In a case –control series carried out in the USA, 189 children (aged 3-17 years) were recruited in a hospital-based child abuse evaluation unit.[158] [evidence level 2-] The children took part in a five- day physical and psychological assessment which included the Children's Perceptual Alteration Scale (CPAS), ADE and CDC. The results were presented in two ways: by age groups (3-5 yrs, 6-10yrs, 11-17yrs) and abuse status (abused, neglected, control) but no statistical analysis was reported. The authors concluded that there was no significant association between prior histories of abuse in any of the groups with any of the dissociation measures.

In a case-control series, 134 French speaking girls were recruited either from referrals to a child protection clinic (n=67, mean age 9.0 SD1.4) or from one of three public schools (n=67, mean age 9.2 SD 1.7) in Canada and assessed with the CDC in French.[159] [Evidence level 2-]. The demographics of the two groups were broadly similar but differed in terms of family structure and parental level of education. The sexually abused (SA) group comprised of 65.6% classified as very serious cases and 46.9% of the girls having experienced chronic abuse over months or years. The results were expressed in seven SA subgroups: no penetration, penetration, no intrafamilial, intrafamilial, no chronic abuse and chronic abuse. In the SA group, 20/67 (29.9%) and in the control group 3/67 (4.5%) presented with clinical levels of dissociation (p<0.01). After correcting for covariables, the odds of presenting with dissociative tendencies were presented as eight-fold in the SA group compared to the control group. The degree or type of sexual abuse did not prove to be predictive of dissociation symptoms.

In a case-control series of 57 adolescents (age range 11 years 3mth to 17yrs 8 mths) were recruited following admission into a acute adolescent inpatient unit in the USA and assessed using the ADE scale.[160] [evidence level 2-] These children were of low socioeconomic class and were categorised as sexually abused, physically abused or both sexually and physically abused. Their data were compared with an historical 'control' group of adolescents aged 13-17 years with a variety of diagnosis and abuse backgrounds. The mean ADE score of the total study group was 32 (no SD given) and this was compared with the mean ADE of the 'control' group 19.2 SD15.0 (P<0.005). Individual ADE score for the study subgroups shown sexual abused adolescents to have a greater score (34.7 SD 31.7) than physically abused adolescents (28.1 SD 25.1) but this was not statistically significant.

In a case-controlled series, 350 children (age range 7-18 years) were recruited from four different settings to form four study groups: non-psychiatric comparative (local schools) (n=75, mean age 11.96 SD 2.25), psychiatric non-abused (n=165, mean age 12.56 SD 2.74), psychiatric abused (n=72 mean age

12.05 SD 2.84), psychiatric suspected abuse (mean age 12.05 SD 2.84) from consecutive inpatient admission to a psychiatric unit in the USA.[161] [evidence level 2-] The main outcome measures of interest was the dissociation subscale of the Trauma Symptom Checklist for Children (TSC-C) and the parent-reported CDC. The results showed 'significant differences' between the three clinical groups and the non-psychiatric control group but no differences between the three clinical groups in terms of the dissociation subscale of the TSC-C. There was no reporting of details of these statistical tests although means and standard deviations of the groups were given. The CDC results were also brief and the authors describe post hoc analysis of the data producing similar results to the dissociation subscale on the TSC-C.

In a retrospective questionnaire validation study, 623 adolescents were recruited to validate the Dissociation Questionnaire in Swedish (DIS-Q).[162] [evidence level 2-] A clinical group of 74 adolescents (mean age 16.03 years) with a history of sexual and or physical maltreatment were recruited from a child and adolescent psychiatric clinic. A control group of 499 adolescents (mean age 15.07 years) was recruited from within schools in the same city. The main aim of the study was to validate the DIS-Q in Swedish but in addition, the results showed that the prevalence of dissociation was 2.3% in the control group (mean score 1.42 SD 0.43) and 50% (2.52 SD 0.8) in the clinical group (P<0.001).

### Evidence statement

The type of evidence available to answer this question was low in terms of quality i.e. mostly case-control studies but it is important to note that this question could not be answered by an intervention study therefore the design of the studies are appropriate and the grading less important. The choice of control group was not always appropriate and covariates not always controlled for. Numbers of participants were low. Overall, the evidence suggests there is a positive association of the presence of dissociation symptoms with previous and or current maltreatment. There was insufficient or no evidence to comment on the role of age or gender, degree, type or chronicity of maltreatment in the development of dissociation symptoms.

### Delphi consensus (see also Appendix C)

The GDG sought the opinions of the Delphi panel for its statement on dissociation. The following statement was used in the survey:

**Round 1**

| Statement number | Round 1 | % agreed | n | Outcome |
|---|---|---|---|---|
| 39a | Healthcare professionals should consider child maltreatment if a child shows dissociation (transient episodes of detachment from current interaction that are outside the child's voluntary control) that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction. | 61 | 85 | Statement amended for round 2. See below. |

Themes from the comments included:

- it is difficult to distinguish dissociation from daydreaming, seizures and deliberate avoidance of interaction
- traumatic events other than maltreatment can lead to dissociation

The guideline development group accepted both of these themes but pointed out that maltreatment should only be considered if the distinction between dissociation and daydreaming, seizures or deliberate avoidance of interaction has been made. Therefore, this statement only applies to healthcare professionals who are able to make that distinction.

**Round 2**.

| Statement number | Round 2<br>For the purposes of the following statement, dissociation is defined as transient episodes of detachment from current interaction that are outside the child's voluntary control that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction. | % agreed | n | Outcome |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 39b | Healthcare professionals should consider child maltreatment if a child shows dissociation that is not explained by a known traumatic event unrelated to maltreatment. | 78 | 76 | Round 2 statement accepted. |

### GDG considerations

Psychologically traumatic events can lead to dissociation. It is not specific to maltreatment and so maltreatment should be considered in the differential diagnosis. Dissociation is a trance-like state that is involuntary. There is no loss of consciousness. The GDG acknowledges that it can be difficult to distinguish dissociation from daydreaming and seizures.

The GDG sought the opinions of the Delphi panel on this recommendation and sufficient agreement was reached (see above and section C.2.2).

### Recommendations

Healthcare professionals should consider child maltreatment if a child shows dissociation (transient episodes of detachment from current interaction that are outside the child's voluntary control that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction) that is not explained by a known traumatic event unrelated to maltreatment.

Please refer to p35 for the definitions of ‘consider’ and its associated actions

# 8. Parent- child interactions

The features of harmful parent-child interaction are encapsulated in the definition of emotional abuse within Working Together to Safeguard Children (see section 3.2 definitions of child maltreatment). The definition is based on a thorough review of literature and clinical experience at the time it was drawn up and updated for the 2006 version. The definition establishes that it is important to look at reported or evident troubling parent-to-child interactions. The effects on the child of these interactions can be caused by other types of maltreatment, as well as emotional abuse (see above).

### GDG considerations

The GDG's opinion is that the UK government's definition of emotional abuse is well-formulated and that direct observation of parent-child or carer-child interactions by healthcare professionals can provide significant pointers to more fundamental concerns that the nature of the relationship between parent and child may be harmful. Therefore, the GDG believes that healthcare professionals should be alerted to how the general concerns in the definition of emotional abuse can translate into specific interactions between parents or carers and children.

There was consensus within the GDG about the recommendations in this section so the views of the Delphi panel were not sought.

### Recommendations

Healthcare professionals should consider emotional abuse when there is concern that parent-child interactions may be harmful. These include:

- negativity, hostility towards, rejection of and/or scapegoating of a child
- developmentally inappropriate expectations of or interactions with a child including inappropriate threats or methods of disciplining
- exposure to frightening and/or traumatic experiences including domestic abuse
- using the child for the fulfilment of the parent's needs, for example, children being used in marital disputes
- failure to promote the child's appropriate socialisation, for example by involving children in unlawful activities, by isolation and by not providing stimulation or education.

If any of these interactions are **persistent**, this is emotional abuse.

Healthcare professionals should consider emotional neglect when there is emotional unavailability and unresponsiveness from the parent/carer towards the child. This includes the family which is high on criticism and low on warmth. If this is persistent, this is emotional abuse.

Please refer to pp33-4 for definitions of 'consider' and 'suspect' and their associated actions

# Appendix A - Declarations of interest

| GDG member | Interest |
|---|---|
| Jane Appleton | October 2003-June 2007, post-doctoral research fellowship guided through the Health Foundation Consortium for Healthcare Research on 'Safeguarding Children, the Management and Organisation of Child Protection Responsibilities in Primary Care'. Has previously conducted research on how health visitors identify vulnerable families. This work has been published in peer-reviewed journals. |
| Tricia Brennan | A member of the child protection special interest group of the Royal College of Paediatrics and Child Health (RCPCH). |
| Geoff DeBelle | National Executive Committee Member of BASPCAN and CPSIG. Member of Birmingham Safeguarding Children Board. Appointed by RCPCH as a Paediatric Advisor to the GMC. |
| Danya Glaser | President/immediate past president of the International Society for the Prevention of Child Abuse and Neglect, research on emotional abuse and neglect and publication on Child Abuse and Neglect in Lancet 2008 |
| Kathryn Gutteridge | NHS employee and council member of the Royal College of Midwives. |
| Christine Habgood | Has previously sat on East Sussex and Brighton and Hove Area Child Protection Committees. Currently lectures annually on child protection matters at Brighton and Sussex Medical School where she holds the post of Honorary Clinical Tutor. |
| Chris Hobbs | Has publications in the area, most recently a publication on Child Abuse and Neglect in Lancet 2008. A member of CPSIG, BASPCAN, ISPCAN. |
| Annemarie Reeves | A Senior Practitioner/Social Worker for Milton Keynes Council, Referral and Assessment Team. Undertakes assessments and section 47 investigations with regard to children in need and children in need of protection. |

# Appendix B – List of questions

## Question

When is feature X a reason to suspect child maltreatment?

## Features addressed in the guidance

| **Physical Features:** | **Neglect - failure of provision and failure of supervision:** | **Clinical presentations:** | **Emotional, behavioural and interpersonal/social functioning:** | **Parent-child interactions** |
|---|---|---|---|---|
| Bruises<br>Bites<br>Cuts and abrasions<br>Thermal injuries<br>Cold injury<br>Hair loss<br>Fractures<br>Intra-cranial injuries<br>Eye trauma<br>Spinal injuries<br>Visceral injuries<br>Oral injury<br>Genital and anal symptoms/genital and anal signs<br>Sexually transmitted infections<br>Pregnancy | General features of neglect<br>Over- and under-nutrition<br>Oral health | Repeated attendance at medical services<br>Dehydration<br>Strangulation and suffocation<br>Apparent life threatening event<br>Poisoning<br>Near drowning<br>Fabricated or induced illness<br>Inappropriate or unexplained poor school attendance | Emotional and behavioural states<br>Self-harm<br>Abdominal pain<br>Disturbances in eating and feeding behaviour<br>Selective mutism (elective mutism)<br>Head banging and body rocking<br>Wetting and soiling<br>Sexualised behaviour<br>Runaway behaviour<br>Dissociation | |

## Features identified that were subsumed under features finally addressed within the guideline (see above)

| ***Demeanour:*** | ***Parent-child interactions:*** | ***Challenging antisocial & aggressive behaviour:*** | ***Wetting and soiling:*** | ***Lack of Attachment:*** |
|---|---|---|---|---|
| Anxiety<br>Poor concentration /pre-occupied<br>Unhappiness<br>Distress<br>Withdrawn<br>Lack of trust /Mistrustful<br>Phobic behaviour<br>Fearful<br>Frozen/Watchful<br>Social isolation<br>Unexplained low self-esteem<br>Unexplained specific fearfulness | Overly attentive parent<br>Parents acting upon developmental inappropriate expectations<br>Threats<br>Distorted parental understanding of the child<br>Inappropriate parental response<br>Scapegoat<br>Inappropriate or unrealistic parental expectations on child's development<br>Abnormal interaction with carer | Affect regulation<br>Tantrums<br>Oppositional-defiant disorder<br>Aggression<br>Preoccupation with violence<br>Poor school behaviour | Constipation unresponsive to treatment<br>Elimination<br>Persistent unexplained diarrhoea | Lacking boundaries<br>Over friendly |

| | | | | |
|---|---|---|---|---|
| | Suspicious parental behaviour<br>Lack of involvement | | | |
| ***Self harm:***<br>Self endangering/self destructive | ***Head-banging and body rocking:***<br>Self-soothing | ***Over-and under-nutrition and disturbances in eating and feeding behaviour:***<br>Weight problems | ***Emotional and behavioural states:***<br>Sleep problems<br>Unexplained fatigue<br>Emotional changes | ***General features of neglect:***<br>Pica |

## Features identified that were excluded from the guideline

| Feature | Reason for exclusion |
|---|---|
| Bullied | Bullying, which refers to hurtful and abusive peer interaction, is not included. Children who behave in a bullying manner and who are subject to being bullied may have been or continue to be maltreated. Bullying may thus be considered an alerting sign to the existence of child maltreatment. However, since bullying occurs and is primarily recognised in peer and educational, rather than in health, settings, it is not considered as of direct relevance to health care professionals' recognition of child maltreatment |
| Conversion disorder | Needs treatment in its own right in the first instance, whatever the possible cause and those treating will look for possible past/present maltreatment |
| Hyperactivity | Very common/ need to exclude ADHD |
| Impaired consciousness | Result of an injury |
| Lies | Common in children |
| Parental affect | Risk factor |
| Poor peer relationships | Could be due to several factors |
| Poor school performance | Not observed in a healthcare setting |
| Stress-related illness | Healthcare professional would first have to identify that stress was contributing to the illness |
| Substance abuse | Consequence of past episodes/dealt with by substance abuse specialists |

# Appendix C – Delphi consensus surveys

## C.1 Background

NICE clinical guidelines are typically based on a review of evidence from published literature, ideally from large, well-conducted studies. The methods used to develop these guidelines are explicit and transparent. They include literature search, assessment and synthesis of evidence and the judgements made by the Guideline Development Group (GDG) to finalise recommendations. While the use of formal consensus methods in NICE guidance is not customary, there are circumstances when they may be warranted, particularly in the absence of robust evidence. The process is separate from the stakeholder consultation of the draft documentation.

A core objective of this guidance on when to suspect child maltreatment was to improve child protection by promoting early recognition of suspected maltreatment by:

- raising awareness of the clinical features associated with maltreatment and the possibility of it.
- providing a concise summary of the major features associated with maltreatment that can be referred to when a child initially presents to the NHS.

The need for consensus methods in the development of this guidance was identified when an extensive review of the literature revealed major deficiencies with the evidence for many of the clinical features of child maltreatment to answer some of the key clinical questions. Against this background, the GDG decided to use a formal consensus approach with a larger external group of consultees on selected questions. Formal consensus methods are used increasingly in combination with the best available evidence to develop clinical practice guidelines.[163] The purpose of the consensus work was to obtain the opinions of an external multidisciplinary group to assist the GDG in making reliable recommendations in at least one of the following circumstances:

- in areas where there was no evidence on a clinical feature's importance in child maltreatment
- where the GDG could not reach internal consensus
- to support the GDG consensus.

### Methods

**Choosing the consensus method**

The GDG chose a modified Delphi method.[164] Delphi is one of the most widely used formal consensus techniques for obtaining opinions from groups of experts and stakeholders. It involves sending participants questionnaires and asking them for their views. The responses are collated and sent back to participants in a summary form allowing them to review their original opinion in light of the group feedback.[165] This process is repeated several times with the aim of obtaining consensus. The GDG used a two-round online survey.

**Defining the project plan**

A plan protocol was designed initially that incorporated all stages and details of the work, including the consensus method to be used, recruitment of participants, data collection and analysis. Importantly, the GDG agreed the ground rules they would use for analysing the results and for formulating the recommendations based on the results from the survey:

- The results of the group ratings will be presented to the GDG, together with comments.
- Whenever appropriate the GDG will aim to formulate a recommendation for each statement. The statements will be worded in a way that can be directly translated into recommendations
- The GDG will explicitly state the basis for its decision
- Statements for which 75% or more of the ratings fall in the 7 to 9 range will be classified as agreement and the GDG will use the statement as a basis for making a recommendation.
- Statements for which 75% or more of the ratings fall in the 1-3 range will be classified as disagreement. The GDG will usually make a negative recommendation (e.g. do not recommend). In certain circumstances the GDG may decide to make a research recommendation or discard the statement. The decision not to make a negative recommendation will need to be agreed by the GDG and it will need to be justified.
- In all other cases the GDG will discard the statement. Exceptionally it may decide to make a recommendation, depending on the degree of variation in the ratings for that statement. Again, this decision will need to be justified and agreed by the GDG.

- In cases where there is agreement in the rating group, but the GDG considers there are grounds to discard the results, the GDG reserves the right to use its own opinion in making the recommendation. This will need to be agreed by the GDG. In such cases, the GDG will explain in detail the reasons why it rejected the results.

**Selecting participants**

Participants were sought using an external advertising campaign with the aim of recruiting at least 50 volunteers with professional expertise in each of the following areas of maltreatment: sexual, physical and emotional abuse, neglect and fabricated or induced illness. Applicants were asked to rate their own level of expertise in each of these areas and to describe their professional experience in child protection.

The advertisement was placed with the following organisations as well as the NCC-WCH and NICE websites:

| Organisation | Method |
|---|---|
| British Association for the Study and Prevention of Child Abuse and Neglect | Charity mailing and advert on website |
| Community practitioners' and health visitors' association | Advert in monthly publication |
| Local safeguarding children boards | Email sent to chairs |
| National Safeguarding Children Association for Nurses | Information circulated to all members via their list of designated nurses in the UK |
| National society for the prevention of cruelty to children | Web entry and information in their weekly newsletter |
| Royal college of general practitioners | Advert and link distributed to GPs with chid health interest/child welfare group |
| Royal college of paediatrics and child health | Advert on website and mail-out to members |
| Royal college of psychiatrists | Email sent to members |

The number of applications to and acceptance of participation in the Delphi survey is outlined in the table below:

| Number of applicants | Number of applications meeting selection criteria | Number of respondents in round 1 | Number of respondents in round 2 |
|---|---|---|---|
| 144 | 124 | 95 | 85 |

The Delphi panel in round 1 comprised:

- 30 Paediatricians (including 13 named/designated doctors for child protection/safeguarding children)
- 15 Nurses (including 14 named/designated nurse for child protection/safeguarding children)
- 3 GPs (1 child protection adviser for GPs)
- 1 Genito-urinary medicine physician
- 7 Health visitors
- 4 Dentists (including 1 named dentist for safeguarding children board)
- 3 Psychotherapists
- 3 Forensic physicians
- 11 Psychiatrists
- 13 Psychologists (including 2 clinical leads for CAMHS)
- 1 Gastroenterologist
- 1 Social services
- 2 Academics
- 1 Other

## Acknowledgements

We would like to thank the following individuals for their valuable contribution to the consensus survey:
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Karen Toohey, Judith Trowell, Jenny Taylor, Rita Turner, Ian F Wall, Judith Ward, Sue Ward, Tracey Ward, Deborah Wardknott, Jane Watkeys, Mary-Jane Willows, Linda Winn, Louise Wolstenholme, Cynthia Yates and Bassi Zahabiyah,

## C.2 Results

Agreement was said to be reached when more than 75% of respondents answered 7, 8 or 9 where 1=strongly disagree and 9=strongly agree. Participants had the option of responding 'I do not have enough expertise to answer this question'. (See section C.3 for the surveys.) Percentage agreement is based on the number of participants who responded with expertise (n).

**C.2.1 Bites**

| **Round 1** | % agreed | n | # responded | | **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **suspect** child maltreatment when there is a report or appearance of a human bite mark, on a child, suspected to be caused by an adult. | 92 | 95 | 95 | ➔ | Healthcare professionals should **suspect** child maltreatment when there is a report or appearance of a human bite mark on a child, in the absence of an independently witnessed incident of biting by another young child to account for the mark | 71 | 82 | 84 | Despite agreement at round 1, the GDG wanted to address the issue of children biting one another. The Round 2 statement was rejected and the Round 1 statement retained. |
| Healthcare professionals should **consider** child maltreatment when a prepubertal child has love bites. | 86 | 95 | 95 | | | | | | Despite agreement at Round 1, the GDG felt that love-bites would be better captured in the statement on bruises. |
| Healthcare professionals should **consider** child maltreatment when a child has self-inflicted bites. | 60 | 94 | 95 | | | | | | This statement was withdrawn from further consideration. |
| Healthcare professionals should **consider** child maltreatment when a child has animal bites. | 41 | 94 | 95 | ➔ | Healthcare professionals should **consider** neglect when there is a report or appearance of an animal bite in a child who has been inadequately supervised. | 77 | 83 | 84 | Round 2 statement accepted. |

**C.2.2 Dissociation**

| **Round 1** | % agreed | n | # responded | | **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment if a child shows dissociation (transient episodes of | 61 | 85 | 95 | | Healthcare professionals should **consider** child maltreatment if a child shows dissociation that is not explained by a known traumatic event unrelated to | 78 | 76 | 84 | Round 2 statement accepted. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| detachment from current interaction that are outside the child's voluntary control) that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction. | | | | ➔ | maltreatment. | | | | |

**C.2.3 Body rocking**

| **Round 1** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|
| Healthcare professionals should **consider** emotional neglect if a child displays habitual body rocking in the absence of medical causes or neurodevelopmental disorders. | 79 | 92 | 95 | Round 1 statement accepted. |

**C.2.4 Pregnancy**

| **Round 1** | % agreed | n | # responded | | **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and there is a clear discrepancy in power, emotional maturity or mental capacity between the young woman and the putative father. | 87 | 92 | 95 | | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and there is concern that the young person is being exploited. | 90 | 92 | 95 | | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and the identity of the father is | 60 | 92 | 95 | ➔ | Healthcare professionals should **consider** child maltreatment as one of the reasons that a young person aged 16 or 17 years of age who is pregnant might conceal the identity of the father. | 66 | 83 | 83 | Statement rejected. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| concealed. | | | | | | | | |

**C.2.5 Sexually transmitted infections**

| **Round 1**<br><br>For the purposes of these statements, sexually transmitted infections include neisseria gonorrheae, chlamydia trachomatis, bacterial vaginosis, genital mycoplasmas, syphilis, anogenital warts, oral warts, genital herpes simplex, hepatitis B and C and trichomonas vaginalis. | % agreed | n | # responded | **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a young person aged 13 to 15 years presents with any sexually transmitted infection unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer. | 93 | 91 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity. | 60 | 91 | 95 | ➔ Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years of age presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer, and one or more of the following is present:<br>• a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner<br>• concern that the young person is being exploited | 92 | 79 | 83 | Round 2 statement accepted. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity, and when there is a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner. | 91 | 92 | 95 | | | | | Round 1 statement accepted (see above) |
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity, and when there is concern that the young person is being exploited. | 90 | 92 | 95 | | | | | Round 1 statement accepted (see above) |

**C.2.6 Genital and anal symptoms**

| **Round 1**<br><br>For the purposes of these statements, medical explanations can include worms, urinary tract infection and nappy rash. | % agreed | n | # responded | **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a child has a genital or anal symptom without a medical explanation. | 81 | 88 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **suspect** child sexual abuse when a child has a genital or anal symptom that is persistent or | 82 | 87 | 95 | | | | | Round 1 statement accepted. |

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|---|---|---|---|---|---|---|---|---|
| repeated without a medical explanation. | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a child has genital bleeding without a medical explanation. | 96 | 89 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **suspect** sexual abuse when a child has genital bleeding that is persistent or repeated without a medical explanation. | 91 | 88 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** sexual abuse when a child has a genital discharge without a medical explanation. | 84 | 89 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **suspect** sexual abuse when a child has genital discharge that is persistent or repeated without a medical explanation. | 77 | 87 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** sexual abuse when a child has anal bleeding without a medical explanation. | 84 | 89 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **suspect** sexual abuse when a child has anal bleeding that is persistent or repeated without a medical explanation. | 81 | 87 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** sexual abuse when a child has anal discharge without a medical explanation. | 86 | 88 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **suspect** sexual abuse when a child has anal discharge that is persistent or repeated without a medical explanation. | 84 | 85 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **consider** sexual abuse when a | 68 | 82 | 95 | Healthcare professionals should **consider** sexual abuse when a child has | 78 | 74 | 83 | Round 2 statement accepted. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| child has dysuria without a medical explanation. | | | | ➔ | discomfort on passing urine (dysuria) or ano-genital discomfort that are persistent or recurrent and is not explained by conditions such as worms, urinary infection, skin conditions, poor hygiene or known allergies. | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has dysuria that is persistent or repeated without a medical explanation. | 51 | 79 | 95 | | | | | Rejected at 'suspect' level |
| Healthcare professionals should **consider** sexual abuse when a child has ano-genital discomfort without a medical explanation. | 70 | 87 | 95 | | | | | Incorporated into above |
| Healthcare professionals should **suspect** sexual abuse when a child has ano-genital discomfort that is persistent or repeated without a medical explanation. | 59 | 85 | 95 | | | | | Rejected at 'suspect' level |
| Healthcare professionals should **suspect** sexual abuse if genital or anal complaints are associated with behavioural or emotional change. | 88 | 90 | 95 | | | | | Round 1 statement accepted. |
| Healthcare professionals should **suspect** sexual abuse if genital or anal complaints are present with other information that suggests the possibility of child sexual abuse. | 98 | 89 | 95 | | | | | Round 1 statement accepted. |

**C.2.7 Neglect**

| **Round 1** | % agreed | n | # responded | | **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** neglect if parents or carers repeatedly fail to seek and adhere to appropriate medical advice for their children. | 91 | 94 | 95 | | | | | | Statement not carried forward as essence captured in the below. |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| These situations can include:<br>• persistent failure to have a child immunised | 45 | 92 | 95 | ➔ | Healthcare professionals should **consider** neglect if parents persistently fail to engage with the Child Health Promotion Programme, which includes health and development reviews, screening, immunisation, anticipatory guidance about infant/child behaviour, injury prevention, feeding and dietary advice and prevention of obesity. | 70 | 82 | 83 | Statement rejected but included in modified form for consultation. |
| • persistent failure to attend follow-up outpatient appointments | 70 | 94 | 95 | ➔ | Healthcare professionals should **consider** neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being. | 87 | 83 | 83 | Accepted at Round 2 |
| | | | | | Healthcare professionals should **suspect** neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being. | 64 | 83 | 83 | Rejected at 'suspect' level (see above) |
| • persistent failure to treat a child for dental caries | 83 | 92 | 95 | ➔ | Healthcare professionals should **suspect** neglect if parents or carers persistently fail to treat their child's dental caries. | 64 | 83 | 83 | Accepted at Round 1 ('consider' level) |
| • persistent failure to adhere to weight management programs | 54 | 92 | 95 | | | | | | Rejected at Round 1 |
| • failure to administer essential prescribed medication | 93 | 94 | 95 | ➔ | Healthcare professionals should **suspect** neglect if parents or carers fail to administer essential prescribed medication for their child. | 73 | 83 | 83 | Accepted at Round 1 ('consider' level) |
| • delay in seeking medical advice. | 80 | 94 | 95 | ➔ | Healthcare professionals should **suspect** neglect if parents or carers fail to promptly seek medical advice for their child to the extent that the child's health and well-being is compromised or the child is in ongoing pain. | 89 | 82 | 83 | Accepted at Round 2 |

**C.2.8 Head banging**

| **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|

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|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment when a child shows habitual head-banging in the absence of a medical cause or other definable stressor. | 54 | 78 | 85 | Omitted at Round 1 and rejected at Round 2 because of a wide spread of results |

**C.2.9 Patterns of healthcare use**

| **Round 2** | % agreed | n | # responded | **RESULT** |
|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment when they become aware of an unusual pattern of presentation to, and contact with, healthcare providers. | 76 | 84 | 85 | Omitted at Round 1 and accepted at Round 2 |
| Healthcare professionals should **consider** child maltreatment when they become aware of frequent presentations or reports of injuries. | 92 | 84 | 85 | Omitted at Round 1 and accepted at Round 2 |

# C.3 Surveys

## C.3.1 Round 1

**National Collaborating Centre for Women's and Children's Health**

**NICE guidance on when to suspect child maltreatment**

**Delphi consensus questionnaire – part 1**

**Thank you for agreeing to take part in this survey.**
Please read this introductory page before answering any of the questions.

**Completing the survey**
This survey consists of a number of statements about which you will be asked your level of agreement. It is preferable that you answer all of the questions in one sitting as the software will not remember your answers if you come back to it a second time. Once started, you cannot revisit questions you've already answered. The survey should take 30 minutes to complete. You should provide your own responses and should not answer on behalf of others.

**Confidentiality agreement**
By taking part in this survey, you are agreeing to keep its contents confidential until such time as the full guidance is published (expected publication date May 2009).

**The guidance**
The guidance that we are developing is aimed at frontline healthcare professionals who are not experts in recognising and diagnosing child maltreatment. Its aim is to raise awareness of child maltreatment in these people and offer advice on clinical situations that are a cause for concern where they should **suspect** or **consider** child maltreatment (see below for definitions). When answering the survey, you should bear in mind that, as someone with experience in child protection, you see a different case mix than general and specialist healthcare professionals.

This guidance recognises that child maltreatment is rarely identified from one symptom or sign alone. Some features carry more weight than others and should raise the healthcare professional's level of suspicion to a greater extent. Other features may be less concerning on their own, but in combination with others or when they persist may be of more concern. We have therefore drawn up two categories of importance to help healthcare professionals **consider** the action that they should take.

**Definitions**
**Child** refers to someone who is younger than 18 years.

**Child maltreatment** is defined as physical abuse (including fabricated or induced illness), sexual abuse, emotional abuse or neglect as set out in Working Together to Safeguard Children (2006).

For the purposes of this guidance, to **suspect** maltreatment implies serious concern; healthcare professionals should follow local guidance on what to do when they think a child is being maltreated.

For the purposes of this guidance, to **consider** maltreatment means that maltreatment should be considered in the differential diagnosis or as a possible explanation of a sign or symptom. It implies that the healthcare professional should record the concern and take one or more of the following courses of action: look for other signs of maltreatment, review the child, look for repeated presentations of this indicator, discuss the case with a suitable colleague and/or consult Contact Point.

These definitions can be referred to throughout the survey by clicking on the definitions link.

**Survey questions**
The questions in this survey are about features of maltreatment on which there is no conclusive scientific evidence. The guideline development group has decided that consensus agreement would add value in deciding whether these recommendations should be included in the final NICE guidance "when to **suspect** child maltreatment". The full set of recommendations in the NICE guidance will be much greater than what you see in the survey.

Please consider carefully whether the recommendations reflect the appropriate level of concern (**consider**/**suspect**) and make any suggestions for revision in the comments section.

**Security and validation**

Please enter the reference number (four digits followed by two letters) that you were sent in your acceptance email. Your answers will only be valid if the PIN you enter matches our records.

**Bites**

Please rate your level of agreement with the following statements where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **suspect** child maltreatment when there is a report or appearance of a human bite mark, on a child, suspected to be caused by an adult. | | | | | | | | | | |
| Healthcare professionals should **consider** child maltreatment when a prepubertal child has love bites. | | | | | | | | | | |
| Healthcare professionals should **consider** child maltreatment when a child has self-inflicted bites. | | | | | | | | | | |
| Healthcare professionals should **consider** child maltreatment when a child has animal bites. | | | | | | | | | | |

| Comment |
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**Dissociation**

Please rate your level of agreement with the following statement where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment if a child shows dissociation (transient episodes of detachment from current interaction that are outside the child's voluntary control) that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction. | | | | | | | | | | |

| Comment |
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**Body rocking**

Please rate your level of agreement with the following statement where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this |
|---|---|---|---|---|---|---|---|---|---|---|

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|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | question. |
| Healthcare professionals should **consider** emotional neglect if a child displays habitual body rocking in the absence of medical causes or neurodevelopmental disorders. | | | | | | | | | | |

| Comment |
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**Pregnancy**

These statements have been written in the context of the sexual offences act. Separate recommendations have been made concerning children aged 15 years and younger that do not form part of this survey.

Please rate your level of agreement with the following statements where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and there is a clear discrepancy in power, emotional maturity or mental capacity between the young woman and the putative father. | | | | | | | | | | |
| Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and there is concern that the young person is being exploited. | | | | | | | | | | |
| Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and the identity of the father is concealed. | | | | | | | | | | |

| Comment |
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**Sexually transmitted infections**

For the purposes of these statements, sexually transmitted infections include neisseria gonorrheae, chlamydia trachomatis, bacterial vaginosis, genital mycoplasmas, syphilis, anogenital warts, oral warts, genital herpes simplex, hepatitis B and C and trichomonas vaginalis.

These statements have been written in the context of the age boundaries set out in the sexual offences act. A separate recommendation has been made concerning children younger than 13 years that does not form part of this survey.

Please rate your level of agreement with the following statement where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a young person aged 13 to 15 years presents with any sexually transmitted infection unless there is clear | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity, and when there is a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity, and when there is concern that the young person is being exploited. | | | | | | | | | | |

| Comment |
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**Genital and anal symptoms**

For the purposes of these statements, medical explanations can include worms, urinary tract infection and nappy rash.

Please rate your level of agreement with the following statements where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a child has a genital or anal symptom without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** child sexual abuse when a child has a genital or anal symptom that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a child has genital bleeding without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has genital bleeding that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **consider** | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| sexual abuse when a child has a genital discharge without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has genital discharge that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a child has anal bleeding without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has anal bleeding that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a child has anal discharge without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has anal discharge that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a child has dysuria without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has dysuria that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **consider** sexual abuse when a child has ano-genital discomfort without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse when a child has ano-genital discomfort that is persistent or repeated without a medical explanation. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse if genital or anal complaints are associated with behavioural or emotional change. | | | | | | | | | | |
| Healthcare professionals should **suspect** sexual abuse if genital or anal complaints are present with other information that suggests the possibility of child sexual abuse. | | | | | | | | | | |

| Comment |
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**Neglect**

Please rate your level of agreement with the following statements where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** neglect if parents or carers repeatedly fail to seek and adhere to appropriate medical advice for their children. | | | | | | | | | | |
| These situations can include: | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| • persistent failure to have a child immunised | | | | | | | | | | |
| • persistent failure to attend follow-up outpatient appointments | | | | | | | | | | |
| • persistent failure to treat a child for dental caries | | | | | | | | | | |
| • persistent failure to adhere to weight management programs | | | | | | | | | | |
| • failure to administer essential prescribed medication | | | | | | | | | | |
| • delay in seeking medical advice. | | | | | | | | | | |

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| Comment |
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### C.3.2 Round 2

**National Collaborating Centre for Women's and Children's Health**

**NICE guidance on when to suspect child maltreatment**

**Delphi consensus questionnaire – part 2**

**Thank you for completing part 1 of this survey.**
There were 95 respondents to part 1.

In part 2, there are two new topics for you to consider and you will revisit topics that were not agreed or disagreed with by sufficient numbers of respondents in the first round. Your views have been taken into account to formulate revised statements. If sufficient agreement is reached, the statements will form the basis of recommendations in the guidance. If there is sufficient disagreement, the statement will be dropped from consideration.

As before, you should complete the survey in one sitting (allow 20 minutes), the definitions of "consider" and "suspect" will be available by clicking the definitions link and you should keep the contents of this survey confidential.

**Patterns of healthcare use**

Please rate your level of agreement with the following statements where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment when they become aware of an unusual pattern of presentation to, and contact with, healthcare providers. | | | | | | | | | | |
| Healthcare professionals should **consider** child maltreatment when they become aware of frequent presentations or reports of injuries. | | | | | | | | | | |

| Comment |
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**Head banging**

Please rate your level of agreement with the following statements where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment when a child shows habitual head-banging in the absence of a medical cause or other definable stressor. | | | | | | | | | | |

| Comment |
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**Bites**

40% of respondents did not agree with the following:
Healthcare professionals should **consider** child maltreatment when a child has self-inflicted bites.

Themes from the comments were:

- it depends on learning disability
- it is difficult to distinguish bites made by child dentition and bites made by adult dentition without expert input.

There was strong agreement that adult bite marks should be a reason to suspect maltreatment but because of anxieties about recognising bite marks from adult dentition, the statement has been revised. The guideline development group has developed a recommendation on self-inflicted injury (not considered in this survey) and this topic will be referred to there.

Please rate your level of agreement with the following revised statement where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **suspect** child maltreatment when there is a report or appearance of a human bite mark on a child, in the absence of an independently witnessed incident of biting by another young child to account for the mark. | | | | | | | | | | |

| Comment |
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59% of respondents did not agree with the following:
Healthcare professionals should **consider** child maltreatment when a child has animal bites.

Themes from the comments were:

- it depends on the animal
- it depends on the level of supervision

Please rate your level of agreement with the following revised statement where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** neglect when there is a report or appearance of an animal bite in a child who has been inadequately supervised. | | | | | | | | | | |

| Comment |
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**Dissociation**

39% of respondents did not agree with the following:
Healthcare professionals should **consider** child maltreatment if a child shows dissociation (transient episodes of detachment from current interaction that are outside the child's voluntary control) that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction.

Themes from the comments include:

- it is difficult to distinguish dissociation from daydreaming, seizures and deliberate avoidance of interaction
- traumatic events other than maltreatment can lead to dissociation

The guideline development group accepts both of these themes but points out that maltreatment should only be considered if the distinction between dissociation and daydreaming, seizures or deliberate avoidance of interaction has been made. Therefore, this statement only applies to healthcare professionals who are able to make that distinction.

Please rate your level of agreement with the following revised statement where **1 = strongly disagree** and **9 = strongly agree**:

For the purposes of this statement, dissociation is defined as transient episodes of detachment from current interaction that are outside the child's voluntary control that can be distinguished from daydreaming, seizures or deliberate avoidance of interaction.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment if a child shows dissociation that is not explained by a known traumatic event unrelated to maltreatment. | | | | | | | | | | |

| Comment |
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**Pregnancy**
40% of respondents did not agree with the following:
Healthcare professionals should **consider** child maltreatment when a young person aged 16 to 17 years of age is pregnant and the identity of the father is concealed.

The general theme from the comments was that there are many reasons why pregnant girls may conceal the identity of the father, including shame, fear of familial disapproval etc.

Please rate your level of agreement with the following revised statement where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** child maltreatment as one of the reasons that a young person aged 16 or 17 years of age who is pregnant might conceal the identity of the father. | | | | | | | | | | |

| Comment |
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**Sexually transmitted infections**

40% of respondents did not agree with the following as a stand-alone statement:

Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection, unless there is clear evidence of blood contamination or that the STI was acquired from consensual sexual activity.

However, over 90% of respondents agreed with the following two statements:

Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination, or that the STI was acquired from consensual sexual activity, and when there is a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner.

Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years presents with any sexually transmitted infection when there is no clear evidence of blood contamination, or that the STI was acquired from consensual sexual activity, and when there is concern that the young person is being exploited.

Please rate your level of agreement with the following revised statement where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a young person aged 16 or 17 years of age presents with any sexually transmitted infection when there is no clear evidence of blood contamination or that the STI was acquired from consensual sexual activity with a peer, and one or more of the following is present:<br>• a clear discrepancy in power, emotional maturity or mental capacity between the young person and their sexual partner<br>• concern that the young person is being exploited | | | | | | | | | | |

| Comment |
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**Genital and anal symptoms**

The following statements on dysuria and ano-genital discomfort were not agreed by sufficient numbers of respondents:

Healthcare professionals should **consider** sexual abuse when a child has dysuria without a medical explanation.

Healthcare professionals should **suspect** sexual abuse when a child has dysuria that is persistent or repeated without a medical explanation.

Healthcare professionals should **consider** sexual abuse when a child has ano-genital discomfort without a medical explanation.

Healthcare professionals should **suspect** sexual abuse when a child has ano-genital discomfort that is persistent or repeated without a medical explanation.

Themes from the comments include:

- confusion about what constitutes a medical explanation and who would be able to provide one
- dysuria not specific to maltreatment

Please rate your level of agreement with the following revised statement where 1 = strongly disagree and 9 = strongly agree:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** sexual abuse when a child has discomfort on passing urine (dysuria) or ano-genital discomfort that are persistent or recurrent and is not explained by conditions such as worms, urinary infection, skin conditions, poor hygiene or known allergies. | | | | | | | | | | |

| Comment |
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**Neglect**

In round 1, we asked separate questions about each of the following bullet points:

Healthcare professionals should **consider** neglect if parents or carers repeatedly fail to seek and adhere to appropriate medical advice for their children.

These situations can include:

- **persistent failure to have a child immunised**
- **persistent failure to attend follow-up outpatient appointments**
- persistent failure to treat a child for dental caries
- **persistent failure to adhere to weight management programs**
- failure to administer essential prescribed medication
- delay in seeking medical advice.

Bullet points in **bold typeface** were not agreed on by 55% (immunisation), 46% (weight management) and 30% (follow-up outpatient appointments) of respondents respectively.

For immunisation, the general theme from the comments was that there are two types of parent who do no have their children immunised. Those who choose not to have their children immunised after being provided with information about immunisation were thought not to be neglectful; parents who do not engage in health promotion were thought to be the neglectful ones.

For non-attendance at follow-up appointments, themes from the comments include:

- it depends on whether the problem has resolved
- it depends why the appointment was made in the first instance.

The statement about weight management was considered too complex an issue to be categorised as neglect.

Please rate your level of agreement with the following revised statements where **1 = strongly disagree** and **9 = strongly agree**:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | I do not have enough expertise to answer this question. |
|---|---|---|---|---|---|---|---|---|---|---|
| Healthcare professionals should **consider** neglect if parents persistently fail to engage with the Child Health Promotion | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Programme, which includes health and development reviews, screening, immunisation, anticipatory guidance about infant/child behaviour, injury prevention, feeding and dietary advice and prevention of obesity. | | | | | | | | | | |
| Healthcare professionals should **suspect** neglect if parents or carers fail to promptly seek medical advice for their child to the extent that the child's health and well-being is compromised or the child is in ongoing pain. | | | | | | | | | | |
| Healthcare professionals should **suspect** neglect if parents or carers fail to administer essential prescribed medication for their child. | | | | | | | | | | |
| Healthcare professionals should **suspect** neglect if parents or carers persistently fail to treat their child's dental caries. | | | | | | | | | | |
| Healthcare professionals should **consider** neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being. | | | | | | | | | | |
| Healthcare professionals should **suspect** neglect if parents or carers persistently fail to attend follow-up outpatient appointments for their children that are essential to the child's health and well-being. | | | | | | | | | | |

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| Comment |
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