



RCPCH GUIDELINE APPRAISAL & SUMMARY

Royal College of Paediatrics and Child Health

Evidence based guidelines for the management of CFS/ME (Chronic Fatigue Syndrome/Myalgic Encephalopathy) in children and young people.

The The Royal College of Paediatrics and Child Health produced the original guideline. This document represents the College's separate appraisal and summary of the authors' completed guidelines, undertaken by individuals not involved with the guideline development. The full guideline may be downloaded via the college website. Whilst only grade A, B & C recommendations have been appraised, other recommendations are also reproduced.

KEY POINTS

- The guideline addresses an important and controversial topic.
- The scope is comprehensive, and covers all relevant aspects.
- Patient support groups were actively involved in the guideline development.
- A formal Delphi consensus process was used for those recommendations where evidence was lacking.
- Some guideline recommendations were changed in the final version to accommodate the findings of this appraisal.

Guideline Scope

The guideline covers management of children and young people up to the age of 18. It includes

- Background on the epidemiology, clinical features and diagnostic criteria for children with CFS/ME.
- Recommendations on making a diagnosis including routine and secondary tests and investigations.
- General management information including managing activity, advice and symptomatic treatment, building relationships with the family and reviewing progress.
- The use of behavioural and pharmacological interventions.
- Treatment of severe cases, the indications for inpatient admission and referral to other health professionals.
- Educational needs and the transfer of care to adult health services.

The guideline does not include the management of children in primary care before referral to a paediatrician, long term inpatient management, the detailed management of co-morbid disorders, or management of children who may be chronically tired but who have a diagnosis of another medical or psychiatric illness which is causing the fatigue. In addition, the guideline does not include an appraisal of the evidence underpinning theories of aetiology, biological /immunological markers of CFS/ME or health economics of the condition.

Recommendations (<i>only grades A, B and C have been appraised</i>)	Grade
Making a Diagnosis	
Taking a Clinical History	
When taking a clinical history in children presenting with symptoms of CFS/ME, sufficient time should be allowed to listen to and document carefully the patient's description of symptoms and any associated disability.	GPP
When taking a clinical history the paediatrician should explore all symptoms described by the patient including asking about the severity, onset and course, and about other symptoms which might suggest alternative diagnoses.	D
An initial family history should include an enquiry into chronic illness, and in particular CFS/ME or similar conditions in any family member.	D
When initially assessing a patient, the paediatrician should be alert to the potential emotional dimensions of the illness including family dynamics, which should be sensitively explored. However unless there are immediate concerns regarding the psychological well being of the patient, a detailed exploration of family dynamics or the taking of a full psychiatric / psychological history is not necessary at this point.	D
The clinician should acknowledge the distress caused to the child / young person and the parent by the symptoms being suffered.	GPP

Recommendations (<i>only grades A, B and C have been appraised</i>)	Grade
<p>Physical Examination & Investigations</p> <p>Paediatricians should undertake a thorough physical examination of all children and young people presenting with symptoms of profound fatigue at the earliest opportunity.</p> <p>Particular components of the examination should include:</p> <ul style="list-style-type: none"> • General physical examination including height, weight and head circumference • A neurological examination (including ophthalmic fundal examination, gait and signs of muscle wasting). • Lymph node/liver/spleen/tonsillar enlargement. Any abnormal clinical signs such as marked cervical lymphadenopathy need full investigation. • Palpation over frontal, ethmoid and maxillary sinuses (to look for evidence of chronic sinusitis). • Lying and standing BP and HR (for evidence of Postural Orthostatic Tachycardia Syndrome (POTS) or postural hypotension). <p>Routine tests on all patients should include a blood test and a urine test for the following investigations:</p> <ul style="list-style-type: none"> • FBC & film to exclude anaemia, iron deficiency and leukaemia. • ESR (or viscosity); (unlikely to be elevated in CFS/ME) and CRP (c-reactive protein) (a high level could suggest autoimmune disease e.g. Systemic Lupus Erythematosus or chronic infection e.g. Tuberculosis). • Blood glucose for diabetes mellitus. • Blood biochemistry (Na, K, creatinine) to look for renal impairment or endocrine abnormality (e.g. Addison's). • CK for evidence of muscle disease. • Thyroid function because early clinical signs of hypothyroidism may be very subtle. • Liver function (transaminases: AST, ALP and albumin) for hepatitis. • Urine tested for protein, glucose / sugar, to exclude renal disease, diabetes mellitus; tested for blood leukocytes and nitrates to exclude and urinary tract infection. 	<p>GPP</p> <p>D</p> <p>D</p>
<p>Viral titres or other viral tests to impute or exclude current viral infection are not recommended apart from EBV IgM, IgG and EBNA (Original recommendation Grade B: Viral titres or other viral tests to impute or exclude current viral infection are not recommended apart from EBV IgM within 3 months of onset.). <i>Comment: the case control evidence is weak and case series make up the majority of this recommendation.</i></p>	<p>C</p>
<p>As with the routine investigations some second line and other investigations may be repeated when there is a change in symptoms or signs, as clinically indicated.</p>	<p>GPP</p>
<p>Assessment of Psychological Wellbeing</p>	
<p>Careful attention to psychological wellbeing is an important part of the assessment and management of CFS/ME in children and young people (Original recommendation Grade B). <i>Comment: the evidence is mainly based on small case control studies but with methodological problems that result in a relatively high risk of bias.</i></p>	<p>C</p>
<p>Professionals managing CFS/ME in children and young people should be aware of the possible contribution of individual and family psychological mechanisms to perceptions of illness severity, illness presentation and to recovery. (Original recommendation: Professionals managing CFS/ME in children and young people should be aware of the possible contribution of individual and family psychological mechanisms to perceptions of illness severity, illness presentation and to recovery and how these might influence the language used. Grade C). <i>Comment: No evidence found for the role of language</i></p>	<p>C</p>
<p>The patient and family should be told that CFS/ME is a possible diagnosis as soon as possible and given a full explanation of what investigations are being undertaken to exclude other possibilities and why.</p>	<p>GPP</p>
<p>The reasons for making a positive diagnosis of CFS/ME should be shared with the patient and their family and documented carefully in the patient's clinical notes.</p>	<p>GPP</p>
<p>Paediatricians should be prepared to ask an experienced colleague for a second opinion if they, the patient or the parents have concerns about the diagnosis of CFS/ME.</p>	<p>GPP</p>
<p>Doctors should explore and acknowledge patients' and parents' beliefs and attributions about the illness as early as possible after a diagnosis of CFS/ME has been made whilst not endorsing possibly unfounded pathogenetic theories.</p>	<p>D</p>
<p>When a positive diagnosis of CFS/ME is made the paediatrician should establish, together with the patient and family, and where appropriate other professionals / team members a comprehensive management plan with the identification of management plan coordinator.</p>	<p>D</p>
<p>As a minimum for all children with CFS/ME the plan should include:</p> <ul style="list-style-type: none"> • Activity management advice including establishing a baseline of activity level and gradual increases as appropriate • Advice and symptomatic treatment as required • Regular review of progress 	
<p>Early engagement of the family, as well as maintaining a therapeutic alliance throughout the illness is crucial for successful implementation of the management plan.</p>	<p>GPP</p>
<p>The member of the team coordinating the management plan should explain to the family the benefits of an activity diary to establish a baseline of activity, and help the child or young person to get started and then review at regular, agreed intervals.</p>	<p>D</p>

Recommendations (<i>only grades A, B and C have been appraised</i>)	Grade
Consistently used functional ability scales can help to determine the level of functioning alongside the plotting of activities in a diary, although sensitivity is advised in patients who are deteriorating.	D
Once a stable baseline of activity has been established the patient, family and the management plan coordinator should agree a cautious increase in activity that the patient feels is achievable.	D
Advice and Symptomatic Treatment	
Diet	
The management team caring for children with CFS/ME should advise patients and families on the general importance of a well-balanced diet while accepting that nausea and loss of appetite may make this hard for the patient to achieve. Restrictive diets are not recommended unless there is well-founded evidence of specific food allergy or intolerance.	D
In the minority of cases where patients have very unbalanced diets, are experiencing problems eating or losing excessive amounts of weight, a referral to a paediatric dietician with understanding of the management plan may be helpful.	D
In severe CFS/ME, dietetic assessment, especially where there is severe weight loss, is essential. A nutritional management plan should be developed involving both the patient and her/his parents.	D
Sleep	
A good history of the sleep pattern and sleep hygiene must be taken in patients with sleep problems before any interventions are started.	GPP
The first line treatment for sleep problems in children with CFS/ME should be behavioural and cognitive interventions to promote a revision of the sleep regime.	D
Medication could be considered for continued sleep problems that have not resolved with non-pharmacological approaches. Caution with dosing should be applied when prescribing medication to children as they can be more sensitive to effects and side-effects of drugs.	D
Pain management	
Simple analgesics such as Paracetamol and Ibuprofen and non-pharmacological measures are first line treatments in the management of pain in children and young people with CFS/ME.	GPP
If simple analgesics and other non-pharmacological measures do not work alone then referral to a psychologist may help with the perception and management of pain.	D
If low-dose Amitriptyline or Nortriptyline are considered these should only be prescribed after consultation with a colleague experienced in their use and side-effects in children and young people. An initial dose of Amitriptyline of 10mg can be gradually increased up to 1mg/kg (maximum 50mg), depending on effect and patient tolerance.	D
When simple analgesics and cognitive behavioural techniques are ineffective, children and young people with severe and persistent pain may be referred to a suitable local pain management clinic where available.	NC
Treatment for Depression and Mood Disorders	
Antidepressant drugs should only be prescribed for children and young people with CFS/ME who have a severe mood disorder in consultation with a colleague who has experience of their use and possible adverse effects in children and young people.	D
If antidepressant treatment is considered appropriate evidence, from adult studies suggests that fluoxetine should be considered as the treatment of first choice. If the initial (4-6 weeks) response is favourable it should be continued for a further 6 months.	D
Regular Paediatric Review	
If there has been a relapse the baseline should be reassessed and the paediatrician should reassure the patient and their family that a return to the previous level of functioning is possible.	D
Paediatricians should reassess the management plan in all children and young people who have not made significant progress after six months making it clear that this is not the fault of the child / young person. A significant deterioration in functional ability is an indication for earlier reassessment.	D
Further information for families	
Patients wishing to find out more about their condition should be supported in doing so but cautioned about the quality of some of the information in the public domain.	GPP
Patients wishing to contact patient support groups should be encouraged to discuss the information provided by the group with their paediatrician or multidisciplinary team.	D
Inpatient Care	
The majority of children and young people with CFS/ME can be managed at home with appropriate support from the GP and the local paediatric team.	D
The majority of children with CFS/ME will not need hospital admission. However there may be some circumstances when an admission is helpful such as, for example, for assessment or initiation of a management plan when the expertise is not available on an outpatient basis. In these circumstances it is preferable that admission is to a local unit with a multidisciplinary team experienced in managing CFS/ME in children and young people.	D
Admission to an inpatient unit should be planned and presented as an option to patients and families with a day-case admission offered if appropriate.	GPP

Recommendations (<i>only grades A, B and C have been appraised</i>)	Grade
If admitted to hospital, children and young people with CFS/ME should be admitted to a child / young person friendly environment where their special needs can be met.	GPP
Interventions for CFS/ME	
Behavioural Interventions	
Extrapolated evidence from adult studies suggests that CBT is likely to be a beneficial management strategy for some children and young people with CFS/ME.	B
Children and young people with CFS/ME should be considered for graded exercise or activity programmes supervised by an experienced therapist.	B
Original Recommendation: There is currently limited evidence for the efficacy of pacing as an effective management strategy for children with CFS/ME. Grade B. <i>Comment: The evidence for this statement was a single pilot RCT with 13 patients in each arm and a high risk of bias. It was felt that this should be incorporated into the text as a statement.</i>	
Prolonged bed rest or complete inactivity should be avoided, where possible, as physical deconditioning is likely to exacerbate the fatigue and muscle weakness associated with CFS/ME.	D
Pharmacological Interventions	
Although there is limited evidence of acute benefit after administration of immunoglobulin in the treatment of CFS/ME in children and young people, due to current concerns over the safety of blood products, immunoglobulin cannot be recommended for routine treatment.	C
Given the inconclusive evidence for the efficacy of magnesium in adults with CFS/ME, the lack of studies on children and young people and concerns regarding toxicity, side-effects and the pain associated with the intervention, intramuscular magnesium injections are not recommended for children and young people with CFS/ME.	D
The use of essential fatty acids, high dose vitamin B12 supplements, steroids, anticholinergic drugs, staphylococcus toxoid or antiviral therapies are not recommended for the treatment of children and young people with CFS/ME.	D
Complementary Therapies	
If patients and families express an interest in trying complementary therapies, they should not be discouraged, providing this does not interfere with current treatment.	D
Referrals to Other health Professionals	
Psychiatry/Psychology	
A referral to psychology/psychiatry is not necessary in every case. However when assessment of psychological well-being suggests that clinically important psychological symptoms are present or if family focused treatments are being considered, a referral should be made if the multidisciplinary team does not include expertise in this area.	D
Any child or young person with CFS/ME with suicidal ideation or who is considered at risk of self-harm should be referred to a psychiatry/psychology team	D
When making a referral to the psychiatry/psychology services the reasons for the referral should be clearly explained.	GPP
Physiotherapy/Occupational Therapy	
When a young person's mobility and daily living is affected by CFS/ME, a referral could be considered to occupational therapists and physiotherapists experienced in treating the condition in children and young people for the assessment and appropriate treatment of mobility problems.	D
General Practice	
If a paediatrician is responsible for the on-going clinical care of a child or young person with CFS/ME, the child's GP must be kept informed about the patient's progress on a regular basis.	GPP
Management of Severe Cases	
In severe cases, it is very important that the paediatrician, patient and family should agree a member of the team who is responsible for coordinating secondary or tertiary key services. This individual should be able to establish a positive therapeutic alliance with the family.	D
Referral to the Child & Adolescent Mental Health Services should be based on the clinical situation, local availability of expertise and family agreement.	D
Children and young people with severe CFS/ME should rarely be admitted to hospital. Where the child / young person is too ill to attend outpatient clinics the member of the team co-ordinating services should offer regular home visits to ensure that the young person's condition is being appropriately assessed and managed.	D
Although inpatient care for children and young people with severe CFS/ME is rarely indicated, there may be some circumstances where it may be appropriate such as to carry out specific tasks which cannot be undertaken on an out patient basis.	D
Where inpatient care is indicated, the referral for admission should, as in all other clinical situations, be on the basis of informed consent and the purpose of the admission, whether for assessment, initiation of treatment or for particular procedures, explained to the patient and family.	GPP

Recommendations (<i>only grades A, B and C have been appraised</i>)	Grade
Where inpatient care is indicated it should be provided in a unit with a multidisciplinary team experienced in the care of children and young people with severe CFS/ME. In cases where a bed in such a unit is not available, and admission is considered by the team and the family to be essential, the child should be admitted to a local unit after consultation with a colleague experienced in providing inpatient care for children and young people with CFS/ME.	D
When admission for a child with severe CFS/ME is indicated, a pre-hospital assessment of the individual needs of the child / young people must be undertaken.	D
Where the doctor-patient/family relationship breaks down and cannot be reconciled, a second opinion should be actively recommended and sought. In these circumstances, the parental and family's choice should be taken into account with regards of which colleague to refer to.	GPP
Paediatricians should familiarise themselves with Sections 17 and 47 of the Children Act 1989 and the appropriate sections of the acts as they apply in Scotland and Northern Ireland.	D
Referral under the Act should be made only when it is reasonable to do so and with the child's / young person's knowledge and consent. The latter may be dispensed with only when failing to refer would place the child / young person at greater risk or hinder enquiries already being made under the Children Act provisions.	GPP
Education and CFS/ME	
Paediatricians should be aware of the Guidance from the Department for Education and Skills on education for children and young people with medical needs or equivalent statutory guidance.	GPP
Paediatricians or management plan coordinator should liaise closely with schools, within existing guidelines on confidentiality, as soon as a diagnosis of CFS/ME has been made to ensure that education forms a part of a comprehensive management plan.	D
The paediatrician should be responsible for the early identification of patients whose condition prevents, or is likely to prevent them from attending school full-time.	GPP
For these patients the paediatrician should liaise with the school, the family and other educational professionals to initiate an early referral to the Educational Welfare System and to ensure an appropriate individualised educational plan is implemented and monitored.	GPP
Anxiety around returning to school should be identified and addressed.	GPP
Transition to Adult Services	
Paediatricians should ensure that their clinic or hospital has a transition policy for the transition of care of adolescents with chronic illness. This policy needs to be flexible enough to be adapted to meet the individual requirements of adolescents with CFS/ME.	GPP
Paediatricians, in consultation with GP's should identify an appropriate health care professional to take over the care of the older adolescent with CFS/ME and make sure that appropriate handover arrangements are in place before discharging their young adults.	D

Grading of recommendations

- A Directly based on evidence from meta-analysis of RCTs, or on at least one RCT.
- B Directly based on evidence from at least one controlled study without randomisation, or at least one other type of quasi-experimental study; or extrapolated evidence from meta-analysis of RCTs, or on at least one RCT.
- C Directly based on evidence from non-experimental descriptive studies, such as comparative studies, correlation studies and case-control studies; or extrapolated recommendation from at least one controlled study without randomisation, or at least one other type of quasi-experimental study.
- D The consensus of a Delphi panel of experts.
- GPP Good practice point based on the clinical experience of the guideline development group.
- NC A recommendation considered by the Delphi panel but did not reach consensus in two rounds.

The College's appraisal was undertaken in October 2004, and new evidence at any time could invalidate these recommendations.

SUMMARY OF 'AGREE' FINDINGS

Methods used to identify the evidence

Embase, Medline and Cinahl, PsychINFO and CLIP databases were searched. The process was well documented.

Professionals involved

The guideline development team was convened by the RCPCH. The group included a wide range of individuals with expertise of young people CFS/ME. Health professionals were drawn across a variety of key disciplines including paediatrics, psychiatry, neurology, epidemiology, physiotherapy and occupational therapy. In addition to this a number of laypersons were included, representing patient support groups, parents, education and guideline methodologists.

Involvement of parents &/or children

There was input from the Association of Young ME (AYME) sufferers and parents of children with CFS/ME on the guideline development group.

The Delphi panel contained members from two different support organisations, 3 parent representatives and 2 young adult patients who have suffered with CFS/ME.

Consensus method used

Modified Delphi method was used with a consensus level set at 75% of recipients ranked the recommendation as a 7 or above on a Likert scale of 1-9. The full process, including the number of participants and the number of responses is well documented.

Clinical audit

None specified.

Overview

This publication presents evidence-based information. Guidelines are “systematically developed statements to assist decisions about appropriate care for specific clinical circumstances” based on systematic reviews of the research literature. Guidelines are not intended to restrict clinical freedom, but practitioners are expected to use the recommendations as a basis for their practice. Local resources and the circumstances and preferences of individual patients will need to be taken into account. Where possible, recommendations are based on, and explicitly linked to, the evidence that supports them. Areas lacking evidence are highlighted and may form a basis for future research.

The Role of the Royal College of Paediatrics and Child Health

In order to raise awareness about the existence of the original guideline and to ensure its relevance for children's health, the College (through its Quality of Practice Committee) appraised the original guideline against the 'AGREE' checklist laid out in its 'standards' document. Having established the quality of the guideline's methodology in this way, the College's Clinical Effectiveness team not involved in the guideline development examined the recommendations presented in the guideline document in the context of the original research papers from which they were derived. The findings of the reviewers are included here. Where discrepancies between their findings and the originals exist, both recommendations have been included. The shaded boxes indicate these areas of discrepancy.

Acknowledgements

The members of the QPC who oversaw the process of the review: Dr Harry Baumer (Chairman), Dr Monica Lakhanpaul, Miss Samantha Love, Dr Ian Maconochie, Dr Bob Phillips, Dr Martin Richardson, Dr Aung Soe, Mrs Morwenna Stewart, Dr Kate Verrier Jones, Dr William Whitehouse.