

Date of Briefing – August 2004

ADHD – how it is treated

Introduction

This section introduces and defines the scope of the briefing and the topic.

A SCIE briefing provides up-to-date information on a particular topic. It is a concise document summarising the knowledge base in a particular area and is intended to act as a 'launch pad' or signpost to more in-depth material. The briefing is divided into the different types of knowledge relevant to health and social care research and practice, as defined by the Social Care Institute for Excellence (SCIE).

(<http://www.scie.org.uk/publications/knowledge.asp>)

The topic of this particular briefing is the treatment of Attention Deficit/Hyperactivity Disorder (ADHD), and the related disorder or sub-type, Hyperkinetic Disorder (HKD), although the literature generally does not distinguish between the two in its recommendations or evaluations of management strategies. The client group being considered by this briefing is children and adolescents only. The behavioural disorder ADHD is characterised by early onset and three particular elements: hyperactivity, inattention and impulsiveness. There are three principal sub-types: predominantly inattentive type; predominantly hyperactive or impulsive type; and a combination of the two types ⁽¹⁾. The basic definition of ADHD is "a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparative level of development" ⁽¹⁾. The essential diagnostic criteria for ADHD demands that a child must be under seven years of age and demonstrate clear social and functioning impairment across more than one setting, for example, home and school, for more than six months. Diagnosis is often difficult because other problems, such as epilepsy, autism, oppositional defiant disorder (ODD), conduct disorder, anxiety, depression, and a range of learning difficulties, can result in similar behaviour to ADHD and/or mask symptoms ^(2,3,4,16). Issues concerning the nature, assessment and diagnosis of ADHD are described in the relevant SCARE briefing ⁽⁵⁾.

Why this issue is important

This section summarises research findings relating to the impact or consequences of ADHD on the life of children, adolescents and families.

If ADHD and its symptoms are not managed appropriately, this can have a detrimental effect on a child's ability to interact with his or her peers and also to develop socially and educationally ^(3,35). A recent large Canadian study found that children with ADHD can experience significantly more psychosocial problems concerning mental health, social functioning and self-esteem than children who do not have the disorder. This in turn can significantly affect their quality of life ⁽³⁶⁾. Children with ADHD have also been shown to evoke "negative parenting", which becomes cyclical, so that parents and children "maintain each others negative patterns of interaction" ⁽³⁾. ADHD is also a persistent condition. Some of the symptoms of ADHD do alleviate over time ⁽⁶⁾, but it has also been demonstrated that undiagnosed or untreated ADHD can lead to major social and behavioural difficulties in adulthood ^(7,8,9). Research suggests that young people and adults with ADHD have higher rates of unemployment, criminality, substance misuse and antisocial behaviour than young people and adults without ADHD ^(3,10,11). The importance of providing effective practices and interventions to manage the condition from an early stage is therefore widely accepted.

What do the different sources of knowledge show?

Organisational knowledge

This section lists and briefly summarises documents that describe the standards that govern the conduct of statutory services, organisations and individuals involved in the management of ADHD.

Guidance on the Use of Methylphenidate (Ritalin, Equasym) for Attention Deficit/Hyperactivity Disorder (ADHD) in childhood. NICE (2000)

<http://www.nice.org.uk/page.aspx?o=TA013>

This guidance advocates the use of Methylphenidate (MPH) for the treatment of ADHD, but only after a detailed diagnostic evaluation, and states clearly that it should be used only as "part of a comprehensive treatment programme", which includes both family and school-based therapy. The stimulant medications named here and licensed for use in the UK in the treatment of ADHD are methylphenidate (MPH), that is, Ritalin and Equasym, and Dextroamphetamine (DEX) ⁽¹²⁾. Dosage is to be within stated limits, but different doses are to be tested to identify the most effective and appropriate dose for the individual child. The prescribed dose therefore needs to be monitored and reviewed by the prescribing clinician. Methylphenidate and Dextroamphetamine are Schedule 2 controlled drugs; they can only be prescribed by child psychiatrists and community paediatricians, although once the dose has been decided, repeat prescriptions can be obtained through GPs. MPH is not licensed for prescription to children under 6 years of age; DEX is not licensed for prescription to children under 3 years of age.

The principal rating tools or questionnaires to be used by teachers and parents both in diagnosis and monitoring of medication for ADHD in the UK are as follows:

Strengths and Difficulties Questionnaire (SDQ)

<http://www.asylumsupport.info/publications/doh/questionnaires.pdf>

Connors Teacher Rating Scale Hyperactivity Index (CTRS-HI) ^(13,14)

This tool is for use by teachers only.

Please note: significant differences in a child's behaviour may be recorded by teachers and parents because medication is often only intended to be most effective during school hours ⁽¹⁵⁾.

Policy community knowledge

This section summarises documents describing proposed structural models for the delivery of policy and improved practice. These documents are published by public policy research bodies, lobby groups, think tanks and related organisations.

WHO (2004). Attention-deficit/hyperactivity disorder. WHO Guide to Mental and Neurological Health in Primary Care.

Title link

http://www.mentalneurologicalprimarycare.org/downloads/primary_care/Attention_deficit_disorder.pdf

This is part of the WHO Guide to Mental and Neurological Health in Primary Care. It is a protocol for the assessment, and diagnosis of ADHD, including advice to be given to parents of children with ADHD.

Department for Education and Skills (DfES); Mental Health Foundation (2003). Effective Joint Working Between Child and Adolescent Mental Health Services (CAMHS) and Schools.

Title link <http://www.dfes.gov.uk/research/data/uploadfiles/RR412.pdf>

This document reports on a research project commissioned from the Mental Health Foundation by the DfES to explore joint working between schools and CAMHS in England, and identifies ways in which improvements may be made to working practices in this field.

Department for Education and Skills (DfES) (2003). Reaching All. An Inclusive Learning Handbook for Prisons and Young Offender Institutions. Supporting People with Learning Difficulties and/or Disabilities.

Title link

<http://www.dfes.gov.uk/offenderlearning/uploads/docs/Cover%20and%20text.pdf>

This guidance document includes a brief section containing recommendations for managing ADHD among young people within these environments.

Department for Education and Skills (DfES) (2001). Promoting Children's Mental Health within Early Years and School-Settings. Guidance. Pupil Support and Access.

Title link <http://www.teachernet.gov.uk/doc/4619/mentalhealth.pdf>

This guidance document has been written for Local Education Authorities, pre-school settings, schools and Child and Adolescent Mental Health Services (CAMHS). It offers pointers to and examples of good practice in terms of the early identification of mental health problems in children and young people in pre-school and school settings. Sections 4.1 and 4.2 deal explicitly with conduct disorder/problems and attention deficit/hyperactivity.

Scottish Intercollegiate Guidelines Network (2001). Attention Deficit and Hyperkinetic Disorders in Children and Young People.

Title link <http://www.sign.ac.uk/guidelines/fulltext/52/index.html>

This guideline offers a pathway for the diagnosis and assessment of ADHD. The guidance was due to be reviewed in August 2003.

It is recognised in many of these documents that the management of ADHD requires many different agencies or bodies to share their knowledge, and also requires that each agency is aware of the others' practices and responsibilities. Increased collaboration between relevant agencies and individuals is therefore strongly recommended in both the research and policy literature^(12,15,17).

It is considered to be the responsibility of the prescribing clinician to maintain regular contact with the family and ensure it is informed about ADHD and all measures taken in its management⁽³⁾. The role of education professionals with an awareness of ADHD and a knowledge of how to manage the condition in an educational or school setting is also advocated^(3,4). Research has been conducted into the development and application of pathways for the management of ADHD^(2,18). A community-based integrated care pathway has been developed by Burgess (Burgess), and a similar, detailed protocol by Hill and Taylor (Hill). The latter protocol emphasised that it is the responsibility of child psychiatrists to see that all relevant parties, including children, teachers, parents and primary care professionals are constantly informed of all management decisions. Guidance documents also recommend that primary care professionals be involved in the routine and long-term management of ADHD^(3,12), although research has indicated a reluctance among GPs to conduct follow-up routine monitoring or to offer repeat prescriptions^(17,19). Also, more than one third of child-care social workers have been shown to have limited knowledge of the efficacy of stimulant medication in the treatment of ADHD; further research has therefore advocated more training of child-care social workers in this field⁽²⁰⁾.

Practitioner knowledge

This section describes studies carried out by health and social care practitioners, documents relating their experiences regarding the topic, and resources produced by local practitioner bodies to support their work.

Berkshire Priorities Committee (2001). Minimum shared care arrangements for Methylphenidate. Policy no.41.

Title link <http://www.berkshire.nhs.uk/priorities/list/policys.asp>

These guidelines serve as the minimum standards for practice in the assessment of ADHD according to local agreements between CAMHS and Primary Care Trusts in Berkshire.

North Derbyshire Priorities and Clinical Effectiveness (PACE) Forum (2002). Methylphenidate (Equasym, Ritalin and now Concerta X) for ADHD.

Title link

<http://www.ukmicentral.nhs.uk/guide/sharedcare/methylphenidate.pdf>

This protocol summarises referral criteria; defines the role and responsibilities of the specialist, GP, parent, carer and teacher; and provides basic information on the prescription of Methylphenidate in the treatment of ADHD.

Each of the UK protocols listed here is based on the relevant NICE guidance⁽¹²⁾. Two Scottish projects which seek to assess and treat ADHD have been described in recent practitioner publications^(47,48). The projects focus on working closely both with schools and the children themselves.

Research knowledge

This section summarises the best available research literature. The focus is on studies undertaken in the United Kingdom, so that their findings are as relevant as possible to the intended audience of the briefing.

Medication

Most research into medications is conducted on adults, and the results extrapolated for children. The stimulant medications MPH and DEX are rare examples of research being conducted specifically on and for children⁽²¹⁾. Research has consistently demonstrated the effectiveness of stimulant medication in the short-term treatment of the “core symptoms” of ADHD: inattention, hyperactivity and impulsiveness^(12,15,22,23,24,25,37,38,42,43). Stimulant medication is known to improve attention and reduce hyperactivity and impulsiveness, but may not positively affect a child’s ability to communicate or interact socially with other people. Some research has shown an effect on social behaviours, however⁽³⁷⁾. All of the research literature advocates careful adjustment of the level of medication to identify the most effective and appropriate dose for the individual child: the reaction of children and adolescents to medication is to be monitored carefully and the dosage is to be reviewed regularly, to identify the best level for the child concerned^(2,6,37,43). This may also include periods, so-called “drug holidays”, such as times out of school, when the treatment is discontinued, to evaluate the beneficial effect of

the medication and other management therapies which may have been implemented ^(4,6).

Stimulant medication is known to have a range of side-effects, including insomnia, abdominal pain, reduced appetite, headaches and depression ^(3,12). These adverse effects appear to be short-term only for most users of this medication ⁽¹²⁾. Stimulants are therefore recognised to be a “successful treatment and well tolerated in most children” ⁽⁸⁾. No significant differences have been demonstrated in effectiveness between the various stimulant medications ^(12,24). Much of this research has considered only the Immediate Release (IR), rapid onset and offset, multiple daily dose medications such as Ritalin-IR®, but sustained release (SR) formulations, such as Ritalin-SR® and Concerta® and Equasym XL®, only require a single daily dose ⁽²⁶⁾. Research has suggested that in some cases the SR formulations may not be quite as effective as the IR formulations ⁽²⁶⁾, although these formulations have been the subject of comparatively little research as yet ⁽²¹⁾. The research has also indicated that stimulant medication should not be used to treat children with ADHD when conditions such as epilepsy, tic disorder or Tourettes syndrome are also present ^(6,12). There is no evidence that stimulant treatment for ADHD affects growth or development ⁽²⁷⁾.

A review of US studies has found rates of non-compliance in taking stimulant medications for ADHD can range from 20-65%, principally due to concerns over the use of such medication; the stigma felt by children and adolescents in taking this medication; and the inconvenience of taking multiple daily doses ⁽²⁶⁾. Compliance has been demonstrated to increase when single-dose, sustained release (SR) formulations are used, and when parents and children have more information about the role of medication in the management of ADHD ⁽²⁶⁾. The possible over-prescription of stimulant medication is recognised as a problem in the literature ⁽¹⁵⁾. Research has also demonstrated that stimulant medication is only effective for 70-80% of children and young people; the remainder fail to respond positively due to either a lack of efficacy or the presence of adverse effects ⁽²²⁾.

Non-stimulant medication, such as the tricyclic antidepressants (TCAs) imipramine (IMI) and desipramine (DMI), has been demonstrated to be effective in treating certain behavioural symptoms associated with ADHD. It has also been found however that these medications carry much greater risks and potentially more adverse side-effects than stimulant medication, such as anorexia, dizziness, lethargy, insomnia and irritability ^(3,27).

Family therapy

A Cochrane systematic review has reported that the evidence for the effectiveness of family therapy for children with ADHD is inconclusive, and more research is needed ⁽²⁹⁾. One review of the available research has questioned the effectiveness of this form of therapy when used by itself, but not in conjunction with medication ⁽²³⁾, and some individual studies have suggested that family and school-based therapy may have some effect on certain non-core symptoms of ADHD ^(25,28), but the evidence is currently limited.

Multi-modal therapy

A combination of treatment types is advocated by policy-makers ⁽¹²⁾, researchers ⁽²²⁾ and reviewers ^(6,23,24). Despite the limitations of a randomized controlled trial of medication and behavioural therapy conducted in the United States, many of which are acknowledged by the study's authors, the findings of the Multimodal Treatment Assessment (MTA) trial are frequently cited to support the effectiveness of both stimulant medication and the combination of stimulant and behavioural therapy in the treatment of children with ADHD who are responsive to medication ^(3,12). Such a combination of treatments has also been shown to lead to a reduction in the necessary effective dose of stimulant medication. However, the findings of a more recent trial do not support this hypothesis for children who respond to stimulant medication ^(38,39,40,41). This trial found that medication was consistently the most effective means of improving the symptoms and behaviour of ADHD children. Additional forms of therapy provided no recognisable benefit.

Other treatments

There is no research evidence to suggest that diet has any significant beneficial or detrimental effects with reference to the specific management of ADHD ⁽³⁾. Other potentially effective treatments which may contribute to managing ADHD and are currently in the early stages of piloted research projects, include neurotherapy ⁽⁴⁴⁾, dance therapy ⁽⁴⁵⁾, and speech and language therapy ⁽⁴⁶⁾.

User & Carer Knowledge

This section summarises the issues raised by service users and carers in relation to this topic, both as described by the literature and as defined through local consultation.

Little academic research has been conducted in the UK into the opinions of parents or children ⁽³⁰⁾. A US study reported that parents and teachers had higher levels of satisfaction with the combination of medication and behaviour therapy than with each individual therapy alone, but were much more likely to support behaviour therapy than the use of medication ⁽²²⁾. A second US study also demonstrated that parents hold certain misinformation about treatments for ADHD, especially relating to the impact of diet and the long-term effects of stimulant medication ⁽³¹⁾. Australian and US studies have raised a number of issues about the different perceptions of parents or teachers and children with reference to stimulant medication treatment for ADHD, however ^(32,33). In both cases a majority of the children reported being positive about the effects of the medication, but parents' perceptions of the positive benefits of the medication were found to be significantly different from those of their children: in cases when children reported neutral or negative feelings, their parents still often reported a positive perception of the medication. The one factor common to all negative reports was the side-effects produced by the medication. A US study also identified children and adolescents' reluctance to

take medication to be attributable to side-effects and feelings of the stigma associated with taking medication ⁽³¹⁾. It has been suggested that these findings may raise ethical issues regarding administering medication to reluctant children ⁽³³⁾. These considerations are also raised in UK guidance documents ⁽⁴⁾. Research findings about the relationship between the effect of medication and the self-esteem of children are inconclusive ⁽³¹⁾.

Recent consultation with parents of children with ADHD, undertaken in the Trent region for this briefing, highlighted a number of additional issues. Parents felt that they rather than any health or social care professional were the principal coordinators of care for their children; they expressed concern over difficulties in accessing potentially valuable means of support from social services, such as disability living allowance (DLA) and respite care ⁽³⁴⁾; and highlighted how their child's transition from primary to secondary education was a particularly difficult time for both parents and children, often because of changes in the responsibilities affecting coordination of care. They were also unconvinced by the value or effectiveness of 'drug holidays'. Some parents also benefited from help and support in completing the questionnaires designed to log their child's behaviour.

Useful Links

This section lists sources of information relevant to services users and professionals who work within this field.

ADDISS

<http://www.addiss.co.uk/>

ADDISS is the National Attention Deficit Disorder Information and Support Service. ADDISS provides information, training and support for parents, sufferers and professionals in the fields of ADHD and related learning and behavioural difficulties.

FOCUS

<http://www.focusproject.org.uk/default.asp>

FOCUS aims to promote clinical and organisational effectiveness in child and adolescent mental health services, with an emphasis on incorporating evidence-based research into everyday practice.

Mental Health Foundation

<http://www.mentalhealth.org.uk/>

The Mental Health Foundation is a UK charity working in mental health and learning disabilities. The Foundation makes available online a number of resources and publications on ADHD.

Royal College of Psychiatrists

<http://www.rcpsych.ac.uk/info/mhgu/index.htm>

This website offers a fact sheet for parents and teachers on ADHD. It can be found under the sections Mental Health Information and Mental Health and Growing Up.

YoungMinds

<http://www.youngminds.org.uk/>

YoungMinds is a national charity committed to improving the mental health of all children and young people. The website has sections for young people, children and parents, and an info centre, which contains materials and resources on both the diagnosis and management of ADHD.

Acknowledgements

Thank you to the experts and service users for their contributions to this briefing.

Reference List

1. **American Psychiatric Association** (1994). Diagnostic and Statistical Manual of Mental Disorders. Washington DC, APA.

This manual contains full details of the tool for diagnosing ADHD.

2. **Hill P., Taylor E.** (2001). An auditable protocol for treating attention deficit/hyperactivity disorder. Archives of Disease in Childhood, 84 (5), 404-409.

This article describes a framework for the management of ADHD.

3. **Scottish Intercollegiate Guidelines Network** (2001). Attention Deficit and Hyperkinetic Disorders in Children and Young People. SIGN Executive.

Title link: <http://www.sign.ac.uk/guidelines/fulltext/52/index.html>

This guideline covers the following aspects of ADHD: definitions and concepts; assessment; pharmacological and non-pharmacological therapies; and information for patients.

4. **British Psychological Society** (2000). Attention Deficit / Hyperactivity Disorder. Guidelines and principles for successful multi-agency working. London, BPS.

This guidance describes and defines professional roles in the diagnosis and treatment of ADHD.

5. **SCARE Project** (2005). ADHD - background, assessment and diagnosis

Title link <http://www.elsc.org.uk/briefings/briefing07/index.htm>

This is a research and policy briefing defining and describing the nature of ADHD.

6. **Bramble D., Pearce J.** (1997). Attention deficit hyperactivity disorder: A rational guide to paediatric assessment and treatment. *Current Paediatrics*, 7, 36-41.

This is a brief summary of the key elements of ADHD from classification to prognosis and services in the UK.

7. **Chu S.** (2003). Occupational Therapy for Children with Attention Deficit Hyperactivity Disorder: a survey on the level of involvement and training needs of therapists. *British Journal of Occupational Therapy*, 66 (5), 209-218.

This UK study reports the findings of a national survey to evaluate the involvement of OTs in the diagnosis and management of ADHD.

8. **Swanson J., Sargeant J., Taylor E., Sonuga-Barke E., Jensen P., Cartwell D.** (1998). Attention-Deficit Hyperactivity Disorder and Hyperkinetic Disorder. *Lancet*, 351 (9100), 429-433.

This is a review article covering the principal issues relating to the diagnosis and treatment of ADHD.

9. **Taylor E., Chadwick O., Heptinstall E., Danckaerts M.** (1996). Hyperactivity and conduct problems as risk factors for adolescent development. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35 (9), 1213-1226.

This is a US longitudinal study examining the likelihood of impaired social functioning among adolescents with ADHD. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8824065

10. **Thapar A.K., Thapar A.** (2003). Attention-deficit hyperactivity disorder. *British Journal of General Practice*, 53 (488), 225-230.

This is a discussion paper concerning the nature, concept and treatment of ADHD. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=14694701

11. **Barkley R.A.** (1998). Attention-deficit hyperactivity disorder: a handbook for diagnosis and treatment. New York, NY, Guilford Press.

This is the key US publication on ADHD.

12. **NICE** (2000). Guidance on the Use of Methylphenidate (Ritalin, Equasym) for Attention Deficit/Hyperactivity Disorder (ADHD) in Childhood. London, NICE.

Title link <http://www.nice.org.uk/page.aspx?o=11652>

This guidance describes and defines standards for the use of methylphenidate, including clinical need, the technology itself, the evidence, implications for the NHS, and clinical audit advice.

13. **Conners C.K., Sitarenios G., Parker J.D., Epstein J.N.** (1998). The revised Conners' Parent Rating Scale (CPRS-R): factor structure, reliability and criterion validity. *Journal of Abnormal Child Psychology*, 26 (4), 257-268.

This article describes one of the principal tools for assessing the behaviour of children with suspected or diagnosed ADHD. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9700518&dopt=Citation

14. **Conners C.K., Sitarenios G., Parker J.D., Epstein J.N.** (1998). Revision and restandardization of the Connors' Teacher Rating Scale (CTRS-R): factor structure, reliability, and criterion validity. *Journal of Abnormal Child Psychology*, 26 (4), 279-291.

This article describes one of the principal tools for assessing the behaviour of children with suspected or diagnosed ADHD. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9700520

15. **Parr J.R., Ward A., Inman S.** (2003). Current practice in the management of Attention Deficit Disorder with Hyperactivity (ADHD). *Child: Care, health and development*, 29 (3), 215-218.

This is a study of the current means of managing ADHD within a locality in the UK.

16. **Thompson M.J., Brooke X.M., West C.A., Johnson H.R., Bumby E.J., Brodrick P., Pepe G., Laver-Bradbury C., Scott N.** (2004). Profiles, co-morbidity and their relationship to treatment of 191 children with AD/HD and their families. *European Child and Adolescent Psychiatry*, 13 (4), 234-242.

This study examines the value of a protocol for the assessment and treatment of children with ADHD on medication managed by a community clinic. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15365894&query_hl=1

17. **Salmon G., Kemp A.** (2002). ADHD: A survey of psychiatric and paediatric practice. *Child and Adolescent Mental Health*, 7 (2), 73-78.

This study reports the findings of a survey of child and adolescent psychiatrists and their practices in the diagnosis and treatment of ADHD.

18. **Burgess I.C.** (2002). Service innovations: attention-deficit hyperactivity disorder - development of a multi-professional integrated pathway. *Psychiatric Bulletin*, 26, 148-151.

This UK study describes the development of a pathway to aid diagnosis of ADHD. Full text available <http://pb.rcpsych.org/cgi/reprint/26/4/148.pdf>

19. **Ball C.** (2001). Attention-deficit hyperactivity disorder and the use of methylphenidate: a survey of the views of general practitioners. *Psychiatric Bulletin*, 25 (8), 301-304.

This study reports the findings of a survey of GPs' experience of and attitudes towards prescribing practice and the treatment of ADHD.

20. **Pentecost D., Wood N.** (2002). Knowledge and Perceptions of Child-Care Social Workers about ADHD. *British Journal of Social Work*, 32 (7), 931-943.

This study reports the findings of a survey of UK social workers with reference to ADHD.

21. **Bramble D.** (2003). Annotation: The use of psychotropic medications in children: a British view. *Journal of Child Psychology and Psychiatry*, 44 (2), 169-179.

This is a review of the evidence of the pharmacological treatment of ADHD in the UK. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12587854

22. **MTA Cooperative Group** (1999). A 14-month randomized clinical trial of treatment strategies for attention-deficit hyperactivity disorder. *Archives of General Psychiatry*, 56 (December), 1073-1086.

This US randomised clinical trial provides the key evidence on the treatment of ADHD by medication and behavioural therapy, and by medication alone. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10591283

23. **Ramchandani P., Joughin C., and Zwi M.** (2004). What are the effects of treatments for attention deficit hyperactivity disorder in children.

Clinical Evidence. Title link
<http://www.clinicalevidence.com/cweb/conditions/chd/0312/0312.jsp>

This is a UK review of the literature addressing specific questions relating to the treatment of ADHD.

24. **Guevara J.P., Stein M.T.** (2001). Evidence based management of attention deficit hyperactivity disorder: evidence based paediatrics. *British Medical Journal*, 323 (7323), 1232-1235.

This US paper reports a case study concerning the evidence-based diagnosis and management of a child with ADHD. Full text available <http://bmj.bmjournals.com/cgi/content/full/323/7323/1232>

25. **Rubia K., Smith A.** (2001). Attention Deficit-Hyperactivity Disorder: Current findings and treatment. *Current Opinion in Psychiatry*, 14 (4), 309-316.

This is a UK review of the literature on the nature, assessment and treatment of ADHD.

26. **Swanson J.** (2003). Compliance with stimulants for Attention-Deficit/Hyperactivity Disorder. Issues and approaches for improvement. *CNS Drugs*, 17 (2), 117-131.

This is a US review of the literature on compliance rates among children and adolescents taking medication for ADHD. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12521359

27. **Biederman J., Faraone S.V., Monuteaux M.C., Plunkett E.A., Gifford J., Spencer T.** (2003). Growth deficits and attention-deficit/hyperactivity disorder revisited: impact of gender, development, and treatment. *Pediatrics*, 111 (5), 1010-1016.

This US study collected and analysed data relating to the health and development of a group of children diagnosed with ADHD.

28. **Sonuga-Barke E., Daley D., Thompson M., Laver-Bradbury C., Weeks A.** (2001). Parent-based therapies for pre-school Attention-Deficit / Hyperactivity Disorder: a randomized controlled trial with a community sample. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40 (4), 402-408.

This UK study evaluates the effectiveness of two different types of parent-based therapies for the management of ADHD among pre-school children.

29. **Bjornstad G., Montgomery P.** (2005). Family therapy for attention-deficit disorder or attention deficit/hyperactivity disorder in children and adolescents. *The Cochrane Library*.

This is a high quality systematic review of all of the literature on the effectiveness of family therapy for managing ADHD. Full text available <http://www.nelh.nhs.uk/cochrane>

30. **ADDISS** (2003). Parents, Provision and Policy. A Consultation with Parents. London, ADDISS.

This document describes the principal findings of a brief survey of parents' views about ADHD conducted by ADDISS.

31. **DosReis S., Magno Zito J., Safer D.J., Soeken K.L., Mitchell J.W., Ellwood L.C.** (2003). Parental perceptions and satisfaction with stimulant medication for Attention-Deficit Hyperactivity Disorder. *Journal of Developmental & Behavioral Pediatrics*, 24 (3), 155-162.

This US study reports the findings of a survey of parents' attitudes towards the pharmacological treatment of their children's ADHD.

Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12806227

32. **McNeal R.E., Roberts M.C., Barone V.J.** (2000). Mothers' and Children's Perceptions of Medication for Children with Attention-Deficit Hyperactivity Disorder. *Child Psychiatry & Human Development*, 30 (3), 173-187.

This US study examined perceptions about treatment medication held by mothers and children with ADHD. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10851792

33. **Efron D., Jarman F.C., Barker M.J.** (1998). Child and parent perceptions of stimulant medication treatment in attention deficit hyperactivity disorder. *Journal of Paediatrics & Child Health*, 34 (3), 288-292.

This Australian study reports the findings of a survey of parents' and children's attitudes towards the pharmacological treatment of their ADHD. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9633980

34. **SCARE Project** (2004). Short breaks (respite care) for children with learning disabilities

Title link <http://www.elsc.org.uk/briefings/briefing05/index.htm>

This is a research and policy briefing defining and describing respite care for families with children with learning disabilities.

35. **Fone K.C., Nutt D.J.** (2005). Stimulants: use and abuse in the treatment of attention deficit hyperactivity disorder. *Current Opinion in Pharmacology*, 5 (1), 87-93.

This is a review of the causes and treatment of ADHD. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=15661631

36. **Klassen A.F., Miller A., Fine S.** (2004). Health-related quality of life in children and adolescents who have a diagnosis of attention-deficit/hyperactivity disorder. *Pediatrics*, 114 (5), 541-547.

This study examines the effect of ADHD and comorbid disorders on the quality of life of children. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15520087&query_hl=4

37. **Chacko A. et al.** (2005). Stimulant medication effects in a summer treatment program among young children with attention deficit/hyperactivity disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 44 (3), 249-257.

This US study examines the effectiveness of stimulant medication on 36 children aged 5-6 years. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15725969&query_hl=6

38. **Abikoff H. et al.** (2004). Symptomatic improvement in children with ADHD treated with long-term methylphenidate and multimodal psychosocial treatment. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43 (7), 802-811.

This US study examines the effectiveness of stimulant medication and other forms of therapy on 103 children aged 7-9 years. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=15213581&dopt=Citation

39. **Hechtman L. et al. Abikoff H. et al.** (2004). Academic achievement and emotional status of children with ADHD treated with long-term methylphenidate and multimodal psychosocial treatment. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43 (7), 812-819.

This US study examines the effectiveness of stimulant medication and other forms of therapy on 103 children aged 7-9 years. Abstract available http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15213582&query_hl=11

40. **Abikoff H. et al.** (2004). Social functioning in children with ADHD treated with long-term methylphenidate and multimodal psychosocial treatment.

Journal of the American Academy of Child & Adolescent Psychiatry, 43 (7), 820-829.

This US study examines the effectiveness of stimulant medication and other forms of therapy on 103 children aged 7-9 years. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15213583&query_hl=9

41. **Scahill L.** (2005). Adding psychosocial therapy to methylphenidate may not improve its effectiveness in stimulant responsive children with ADHD. Evidence-based Mental Health, 8 (1), 9.

This is a review of a US trial comparing therapies to treat ADHD. Full text available <http://ebmh.bmjournals.com/cgi/content/full/8/1/9>

42. **Kelsey D.K. et al** (2004). Once-daily atomoxetine treatment for children with attention deficit/hyperactivity disorder, including an assessment of evening and morning behaviour: a double-blind, placebo-controlled trial. Pediatrics, 114 (1), 1-8.

This is US commercial research study on the effectiveness of a one-dose stimulant medication. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=15231966

43. **Dopfner M. et al.** (2004). Effectiveness of an adaptive multimodal treatment in children with Attention-Deficit Hyperactivity Disorder – global outcome. European Child & Adolescent Psychiatry, 13 (S1), 117-129.

This is a German study of a combined treatment for children aged 6-10 years with ADHD. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15322962&query_hl=9

44. **Monastra V.J.** (2005). Electroencephalographic biofeedback (neurotherapy) as a treatment for attention deficit hyperactivity disorder: rational and empirical foundation. Child & Adolescent Psychiatric Clinics of North America, 14 (1), 55-82.

This is a review of a potential new treatment for ADHD. Abstract available

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15564052&itool=iconabstr&query_hl=15

45. **Majorek M., Tuchelmann T., Heusser P.** (2004). Therapeutic Eurythmy – movement therapy for children with attention deficit hyperactivity disorder (ADHD): a pilot study. Complementary Therapies in Nursing and Midwifery, 10 (1), 46-53.

This Swiss study reports on five case studies using a potential new treatment for ADHD. Abstract available
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=14744506&dopt=Abstract

46. **Clegg J., Hartshorne M.** (2005). Speech and language therapy in hyperactivity: a United Kingdom perspective in complex cases. *Child & Adolescent Psychiatric Clinics of North America*, 14 (1), 55-82.

This is a UK review of the role SLT can play in the assessment and management of ADHD. Abstract available
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15359370&query_hl=17

47. **Whyte A.** (2004). Treating children with ADHD. *Nursing Times*, 25 May, 26-27.

This article reports on the Changing Lanes project in Falkirk for children with ADHD.

48. **Brown G., Bruce K.** (2004). A nurse-led ADHD service for children and adolescents. *Nursing Times*, 5 October, 36-38.

This article reports on an audit of local guidelines developed for the assessment and management of ADHD. Abstract available
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15526569&query_hl=1