1 Appendices

Appendix 1: Scope for the development of the clinical guideline

Final version

8 August 2006

Guideline title

Attention deficit hyperactivity disorder: diagnosis and management of ADHD in children, young people and adults

Short title

ADHD

Background

The National Institute for Health and Clinical Excellence ('NICE' or 'the Institute') has commissioned the National Collaborating Centre for Mental Health to develop a clinical guideline on attention deficit hyperactivity disorder for use in the NHS in England and Wales. This follows referral of the topic by the Department of Health and Welsh Assembly Government (see Appendix). The guideline will provide recommendations for good practice that are based on the best available evidence of clinical and cost effectiveness.

The Institute's clinical guidelines will support the implementation of National Service Frameworks (NSFs) in those aspects of care where a Framework has been published. The statements in each NSF reflect the evidence that was used at the time the Framework was prepared. The clinical guidelines and technology appraisals published by the Institute after an NSF has been issued will have the effect of updating the Framework.

NICE clinical guidelines support the role of healthcare professionals in providing care in partnership with patients, taking account of their individual needs and preferences, and ensuring that patients (and their carers and families, where appropriate) can make informed decisions about their care and treatment.

Clinical need for the guideline

Attention deficit hyperactivity disorder (ADHD) is a heterogeneous behavioural syndrome and its diagnosis does not imply any specific cause. However various genetic and environmental risk factors have been implicated

in its development. ADHD is characterised by the 'core' signs of inattention, hyperactivity and impulsiveness. There are two main sets of diagnostic criteria in current use, the International Classification of Mental and Behavioural Disorders 10th Revision (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV). The ICD-10 definition makes reference to hyperkinetic disorder, primarily evidenced by high abnormal levels of hyperactivity, and a combined sub-type in which hyperactivity, impulsivity and inattention need to be present, together with stricter requirements for pervasiveness across situations, and exclusion of comorbidity. The DSM-IV criteria describes ADHD more broadly to include three subtypes: a combined subtype in which all three core signs are present; a predominantly inattentive subtype in which inattention is present but not hyperactivity or impulsiveness; and a predominantly hyperactive–impulsive subtype in which hyperactivity and impulsiveness are present but not inattention. Both ICD-10 and DSM-IV require 6 months duration of symptoms. The identification of ADHD in adults, and the diagnostic criteria that should underpin case recognition, are less clear and lead to uncertainties in practice.

ICD-10 and DSM-IV adopt a different approach to comorbidity. In ICD-10, secondary complications to hyperkinetic disorder include dissocial behaviour and low self-esteem. In DSM-IV common comorbidities include: Disruptive Behaviour Disorders, Mood Disorders, Anxiety Disorders, Learning Disorders and Communication Disorders, ADHD is not diagnosed if symptoms of inattention and hyperactivity occur exclusively during the course of a Pervasive Developmental Disorder or a Psychotic Disorder; but the problems may still need to be recognised and treated. It seems likely that a similar pattern of comorbidities pertains to adults with ADHD, although definitive research in this area is lacking.

A number of genetic and environmental risk factors for ADHD have been identified. Hereditary aspects, neuroimaging data and responses to pharmacotherapeutic agents support the suggestion that ADHD has a biological component. However, there is a continuing debate over the causes of ADHD.

ADHD affects children, young people and adults in different ways and to different degrees, but the consequences of severe ADHD can be serious for both the individual and their family and carers. Children with ADHD often have low self-esteem and can develop additional emotional and social problems. The secondary effects of ADHD can be damaging. For example, some children and young adults with ADHD are at increased risk of accidental harm and many later have an increased risk of automotive accidents. Moreover, affected children are often exposed to years of negative feedback about their behaviour and may suffer educational and social disadvantage. A sizeable proportion of children referred for hyperactivity

disorders continue to have problems into adulthood, including emotional and social problems, substance misuse, unemployment and involvement in crime.

Estimates of the prevalence of hyperkinetic disorder / ADHD vary widely within and between countries. Prevalence estimates for hyperkinetic disorder in children and young people are around 1–2% in the UK. ADHD is estimated to affect 3–9% of school-aged children and young people in the UK, and about 2% of adults worldwide (using DSM IV diagnostic criteria). These differences are, at least in part, explained by differences in diagnostic criteria used in different countries.

Studies of clinic based diagnoses suggest that ADHD is nine times more common in males, although this gender imbalance is inflated to some extent by referral bias; epidemiological studies suggest that prevalence is only two to four times greater in males.

The prescribing of stimulant drugs for ADHD reflects the increased frequency of diagnosis of this condition. In 1998 there were about 220,000 prescriptions in England for stimulant drugs (methylphenidate and dexamfetamine) at a net cost of about £5 million; in 2004 this number had almost doubled to 418,300 at a cost of almost £13 million.

The use of CNS stimulants has been controversial and there are concerns about prescribing such medication to children. Further anxieties surround the potential for their inappropriate prescription, abuse and unauthorised trading and/or illegal selling.

The Guideline

The guideline development process is described in detail in two publications which are available from the NICE website (see 'Further information'). The guideline development process: an overview for stakeholders, the public and the NHS describes how organisations can become involved in the development of a guideline. Guideline development methods: information for National Collaborating Centres and guideline developers provides advice on the technical aspects of guideline development.

This document is the scope. It defines exactly what this guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health (see Appendix below).

The areas that will be addressed by the guideline are described in the following sections.

Population

The guideline will cover:

- The treatment of children aged 3 years and older, young people and adults with a diagnosis of ADHD and related diagnoses: hyperkinetic disorder (ICD-10) will be considered, along with the three DSM-IV ADHD subtypes.
- The management of common comorbidities in children, young people and adults with ADHD as far as these conditions affect the treatment of ADHD.
- The specific management of ADHD in those individuals who also have:
  - a learning disability
  - a defined neurological disorder.

The guideline will not cover:

- the separate management of comorbid conditions
- the management of children younger than 3 years

Healthcare setting

The guideline will cover the care provided by primary, community and secondary healthcare professionals who have direct contact with, and make decisions concerning, the care of children, young people and adults with ADHD.

This is an NHS guideline. It will comment on the interface with other services such as social services, educational services, the voluntary sector and young offender institutions, but it will not include recommendations relating to the services exclusively provided by these agencies; except insofar as the care provided in those institutional settings provided by healthcare professionals, funded by the NHS. Recommendations in the guideline will nevertheless map onto the tiered model of CAMHS services specified in the NSF for children and utilised in the NICE guideline on depression in children. Some of the recommendations will be made to staff in the education services, where this may have a positive contribution to the health of a child with ADHD, either directly (where this is appropriate) or indirectly through collaborative working with CAMHS professionals

The guideline will include:

- care in general practice and NHS community care
- hospital outpatient and inpatient care
- primary/secondary interface of care
- transition from childhood services to adult services.

Clinical management

Areas that will be covered by the guideline

- The full range of care routinely made available by the NHS.
- Validity, specificity and reliability of existing diagnostic criteria (ICD-10 and DSM-IV) in children, young people and adults, and to determine / specify the criteria that should be used to determine the circumstances in which this guideline should be used.
- Assessment both before and after diagnosis.
- Early identification of ADHD in children at risk, and identification of factors that should lead to investigation into the possibility of ADHD.
- Pathways to treatment.
- Identification and management of risk.
- The appropriate use of pharmacological interventions, for example initiation and duration of treatment, management of side effects and discontinuation. Specific pharmacological treatments considered will include:
    - methylphenidate and dexamfetamine (currently licensed for treatment of ADHD in children and young people)
    - atomoxetine (currently licensed for treatment of ADHD in children and in adults if treatment was initiated in childhood).
    - tricyclic and other antidepressants.
    - bupropion
    - nicotine (as skin patches)
    - clonidine
    - atypical antipsychotics (particularly risperidone)
    - modafinil

    Note that guideline recommendations will normally fall within licensed indications; exceptionally, and only where clearly supported by evidence, use outside a licensed indication may be recommended. The guideline will assume that prescribers will use a drug's Summary of Product Characteristics to inform their decisions for individual patients.

- All common psychological interventions currently employed in the NHS for example, family interventions, cognitive-behavioural treatments, and parent training.
- Combined pharmacological and psychological treatments.
- Other physical treatments, including dietary elimination and supplementation.
- Treatment approaches for adults with ADHD (including longer-term outcomes and transitions from child to adult healthcare).
- Sensitivity to different beliefs and attitudes of different races and cultures, and issues of social exclusion.
- The role of the family or carers in the treatment and support of people with ADHD (with consideration of choice, consent and help), and support

that may be needed by carers themselves.

Areas that will not be covered by the guideline

- Treatments not normally available in the NHS.

Status

Scope

This is the final scope.

The guideline will incorporate the following relevant technology appraisal guidance issued by the Institute:

Methylphenidate, atomoxetine and dexamfetamine for the treatment of attention deficit hyperactivity disorder in children and adolescents (including a review of guidance no.13) NICE Technology Appraisal (Published March 2006)

Previous recommendations made in other guidelines may be updated by this guideline, based on the most up-to-date evidence for this particular population.

Guideline

The development of the guideline recommendations will begin in March 2006.

Further information

Information on the guideline development process is provided in:

- *The Guidelines Manual 2006.*

This booklet is available as PDF files from the NICE website (http://www.nice.org.uk/page.aspx?o=308639). Information on the progress of the guideline will also be available from the website.

Referral from the Department of Health and Welsh Assembly Government

The Department of Health and Welsh Assembly Government asked the Institute:

To prepare a guideline for the NHS in England and Wales on the diagnosis and treatment of attention deficit Hyperactivity disorder in children, young people and adults, where evidence for treatment effectiveness is available. Treatment should include the effectiveness of methylphenidate and other pharmacological and psychological interventions in combination or separately.

Appendix 2: Declarations of interests by GDG members

With a range of practical experience relevant to ADHD in the GDG, members were appointed because of their understanding and expertise in healthcare for people with ADHD and support for their families and carers, including: scientific issues; health research; the delivery and receipt of healthcare, along with the work of the healthcare industry; and the role of professional organisations and organisations for people with ADHD and their families and carers.

To minimise and manage any potential conflicts of interest, and to avoid any public concern that commercial or other financial interests have affected the work of the GDG and influenced guidance, members of the GDG must declare as a matter of public record any interests held by themselves or their families which fall under specified categories (see below). These categories include any relationships they have with the healthcare industries, professional organisations and organisations for people who misuse drugs and their families and carers.

Individuals invited to join the GDG were asked to declare their interests before being appointed. To allow the management of any potential conflicts of interest that might arise during the development of the guideline, GDG members were also asked to declare their interests at each GDG meeting throughout the guideline development process. The interests of all the members of the GDG are listed below, including interests declared prior to appointment and during the guideline development process.

Categories of interest

- **Paid employment**
- **GDG members were asked to declare the following interests annually and at each meeting:**

  Personal pecuniary interest: Any financial involvement or planned financial involvement with the healthcare industry in the previous 12 months and, if so whether it is ongoing. This includes:

  - holding a directorship, or other paid position
  - carrying out consultancy or fee paid work
  - having shareholdings or other beneficial interests
  - receiving expenses and hospitality over and above what would be reasonably expected to attend meetings and conferences

  Personal family interest: A family member with any financial involvement or planned financial involvement with the healthcare industry in the previous 12 months. This could include:

  - holding a directorship, or other paid position
  - carrying out consultancy or fee paid work
  - having shareholdings or other beneficial interests
  - receiving expenses and hospitality over and above what would be reasonably expected to attend meetings and conferences

  Non-personal pecuniary interest: Managerial responsibility within the past 12 months for a department or organisation that has had financial involvement with the healthcare industry or for which such financial involvement is planned. This includes:

  - a grant or fellowship or other payment to sponsor a post, or contribute to the running costs of the department
  - commissioning of research or other work
  - contracts with, or grants from, NICE

  Personal non-pecuniary interest: Having expressed a clear opinion on the matter under consideration which has been:

  - reached as a conclusion of a research project
  - and/or expressed as a public statement
  - Membership in a professional organisation or advocacy group with a direct interest in a matter under consideration by NICE
  - Any other reason why people might assume bias in the work done for NICE

Declarations of interest	
Professor Eric Taylor - Chair, Guideline Development Group	
Employment	Professor of Child and Adolescent Psychiatry, Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London.
Personal pecuniary interests	None
Personal family interests	None
Non-personal pecuniary interests	Research grants held: PI for Project grant: Research trial of omega-3 fatty acid supplementation. Main funding (£98,000) from Mother & Child Foundation; Equazen Ltd (oil manufacturers) fund £28,000 and contribute oil, placebo and administrative assistance. 2007-8. PI for Programme grant: Developmental psychopathology of hyperactivity and attention deficit (Medical research Council), 2000-2005; £1,026,000; 50% time. PI for Health services research project: Assessment of child mental health needs in Croydon and Lambeth (South London & Maudsley NHS Trust); £217,000; 2000-2003; 5% time. Co investigator for Equipment and infrastructure funding: Functional magnetic resonance scanning for developmental research (JIF); PI (with S. Williams), 2002; £2,700,000. Co investigator for Project grant: IMAGE; International multicentre genetic investigation of ADHD (National Institute of Mental Health, USA); (with S Faraone [PI], P Asherson, J Sergeant, J Buitelaar, A Rothenberger); 2002-2005; £2,400,000; 5% time.
Personal non-pecuniary interests	2004 – present Chair of the ADDISS charity professional board. 1968 – 2008. Extensive papers and reviews on ADHD including *People with Hyperactivity* book (2007, MacKeith press). 2005 – 2006 Expert for NICE technology appraisal of methylphenidate, dexamfetamine and atomoxetine. 2004. Presented to consensus conference on juvenile bipolar disorder for development of NICE bipolar disorder guideline. 2004. Senior author on European Clinical Guidelines for hyperkinetic disorder- first upgrade; 2006 Last author for European Clinical Guidelines on long-acting medications for ADHD 2007- present Member, Psychiatry Expert Advisory Group for Medicines and Health Products Regulatory Agency 2007- present Non-Executive Director, South London and Maudsley NHS Foundation Trust. 2007. Nutt et al. Evidence-based guidelines for management of attention-deficit/hyperactivity disorder in adolescents in transition to adult services and in adults: recommendations from the British Association for Psychopharmacology. *J Psychopharmacol* 2007:21. 10-41.

Professor Philip Asherson	
Employment	Professor of Molecular Psychiatry, Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, London
Personal pecuniary interests	2008. Talk to Regional Division of the Royal College of Psychiatry (special interest in psychopharmacology), in Manchester. £1,000 donated by Astra-Zeneca to University research fund. 2008. Talk to child and adolescent psychiatric services on clinical management of ADHD in adults in London. UCB Pharma donated £500 to University research fund. 2008. Talk to child and adolescent psychiatric services on clinical management of ADHD in adults in Manchester. UCB Pharma donated £500 to University research fund. 2008. Talk on genetics of ADHD at the European Academy for Childhood Disability meeting in Zagreb. Travel and accommodation funded, 2007: Live 'Web broadcast, on clinical diagnosis and treatment of ADHD in adults. Posted on website (http://www.flynnpharma.com/index.cfm/fuseaction/Pages.getPage/Id/34) Funded by Flynn Pharma. £1,000 donated to University Research Fund. 2007. Talk to specialist nurses on clinical management of ADHD in adults in Sheffield. UCB Pharma donated £500 to University research fund. 2007. Talk to specialist nurses on clinical management of ADHD in adults in London. UCB Pharma donated £500 to University research fund. 2007. Talk on clinical treatment of ADHD in adults at the Andrew Sims Centre. £500 from the centre donated to University research fund. 2007. Attended advisory board meetings for Shire, Janssen Cilag; reimbursements of approx. £2,000 donated to the University research fund. 2007. Talk to nurses, psychiatrists and psychologists on clinical management of ADHD in adults, to Central and North Western mental health trust. £500 donated to University research fund, sponsor Eli-Lilly. Talk on clinical management of ADHD in adults. Sponsored by Eli Lilly who donated £500 to University research fund. Talk on clinical management of ADHD in adults to child and adult psychiatrists in Bromley. £500 donated by Eli Lilly to University research fund. 2004-2005 Janssen-Cilag sponsored talks (x2) ($2000 each); Payments donated to University research fund. 2007. Advisory panel meeting for Pfizer (approximately £1,000 donated to University research fund; Talk on clinical management of adult ADHD & genetics of ADHD, Istanbul, sponsor unknown (travel + £500 donated to University research fund); Talk on clinical management of adult ADHD, Manchester funded by Janssen Cilag (travel + £500 donated to University research fund); Roadshow on treating adults with ADHD for nurses funded by Shire

	(travel + £800 donated to University research fund) British Association of Psychopharmacology training days (travel + £350 donated to University research fund). Masterclass on diagnosis and treatment of ADHD in adults. (April 2007; November 2007; March 2008) December 2004, 2005, 2007. Member of the international ADHD genetics consortium. International meeting for investigators studying genetic influences on ADHD. Accommodation and travel funded for by a grant from that National Institute of Mental Health to Steve Faraone. 2006: Attended European Network of Hyperactivity Disorder (Eunethydis) meeting in Belgium (funded for hotel stay during conference. Gave presentation of genetic association studies in ADHD. Dopamine 50 conference in Sweden (travel and accommodation funded), Talk on topic of genetic influences on the risk for ADHD.
Personal family interests	None
Non-personal pecuniary interests	2002-2007 US NIMH Programme grant International Multi-centre ADHD Genetic Project Approximately £2,000,000. 2005-2008. Collaborator on MRC study of cognitive function in ADHD families. Approximately £300,000 2007 – 2012 Programme grant from National Institute of Clinical Health Research to study the longitudinal outcomes of ADHD and to quantify rates of adult ADHD within the health service (approximately £2,000,000); 2003-2006. Co-investigator on Wellcome project of inattention and activity levels in a population sample of twins. Approximately £350,000; 2006-2007 Unrestricted grant from Janssen-Cilag for evoked response potential studies of adult ADHD (£5,000)
Personal non-pecuniary interests	2008. Royal College of Psychiatry training day. Talk on continuities between child and adult ADHD. 2007. Attended International Psychiatric genetics meeting and gave talk on linkage and association studies of ADHD. 2007, Attended international conference for whole genome association studies of ADHD. Author of 64 peer reviewed papers on clinical and genetic aspects of ADHD. . 2007: Talking genetics of ADHD with Robert Findlay – interview recorded and posted on the internet (no longer available) 2007. Published editorial in British Journal of Psychiatry on the need for clinical services for adults with ADHD. 2007: Article on ADHD in adults posted on BBC Horizon website. 2007: live interview for BBC Women's Hour on living with adult ADHD 2007. Nutt et al. Evidence-based guidelines for management of attention-deficit/hyperactivity disorder in adolescents in transition to adult services and in adults: recommendations from the British Association for Psychopharmacology. *J Psychopharmacol* 2007:21. 10-41. 1996 – 2008: Lead clinician in the National Adult ADHD clinic at the Maudsley Hospital.
Mr Simon Bailey (2006-2007)	
Employment	

Personal pecuniary interests	None
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	"Disordered Performances: An Ethnography of ADHD in Young Children" University of Nottingham. PhD research. Two published papers and one journal article, all expressing clear opinions on DSM-defined ADHD.
Dr Karen Bretherton	
Employment	Consultant Psychiatrist for Children with Learning Disabilities Child and Adolescent Mental Health Services, Leicestershire Partnership NHS Trust, Leicester.
Personal pecuniary interests	2006. Attendance at Child and Adolescent Learning Disability Professional Network. Fee reduced by UCB Pharmaceuticals, Eli Lilly and Janssen-Cilag by £42 per delegate.
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	2006 ADHD chapter co-author, Prescribing Guidelines for adults with learning disabilities;
Dr Val Harpin	
Employment	Consultant Paediatrician (Neurodisability), Ryegate Children's Centre, Sheffield
Personal pecuniary interests	Attended advisory meetings arranged by Pfizer,(2007) Janssen-Cilag (2006)and Eli Lilly.(2005,2007,2008) Gave non-promotional lectures at ADHD meetings sponsored by Pharmaceutical companies as listed below: 2006. Janssen-Cilag sponsored meeting on service networks for management of ADHD. £300 plus accommodation. 2006. Invited speaker at ADHD study session sponsored by Eli Lilly. £500. 2006. Invited speaker on ADHD and QOL sponsored by Janssen-Cilag. £400. 2006. ADHD chair of South Yorkshire meeting. Sponsored by UCB. £300. 2006. Invited speaker as ASCAPAP sponsored by Eli Lilly. £1000. 2006. Invited speaker on Quality of Life and ADHD sponsored by Eli Lilly. £800. Jan 2007 Invited Speaker on ADHD and Comorbidity (£250) Eli Lilly May 2007 invited Speaker ADHD and ASD. (sponsor UCB £400) August 2007 sponsored to attend ESCAP meeting by Lilly (course fee and accommodation)
Personal family interests	None
Non-personal pecuniary interests	Investigator on Trial using Atomoxetine in ADHD (2000 until 2007) and Investigator on Sunbeam trial (2005/6) both funded by Eli Lilly. The

	Ryegate Children's Centre received research funding from Eli Lilly for nursing and psychology assistant time to follow-up children with ADHD, on these Trials which involved using drug treatments Also enrolled some children in ADORE a naturalistic study following children on all kinds of ADHD management (funded for time by Lilly paid to SCH Trust)
Personal non-pecuniary interests	Advocate of using quality of life measures to monitor ADHD, has written articles on the effect on the family of having a child with ADHD Presented paper on September 15 2006 Quality of Life in ADHD and in October 2006 at EACD. Invited organizer of Symposium on ADHD at RCPCH Annual meeting 2007.
Professor Chris Hollis	
Employment	Professor of Child & Adolescent Psychiatry, Division of Psychiatry, University of Nottingham, Queens Medical Centre, Nottingham
Personal pecuniary interests	2005, Janssen-Cilag unrestricted support for chairing and organising an educational meeting on the implication of new European ADHD guidelines, Nottingham (£1000)
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	None
Dr Daphne Keen	
Employment	Consultant Developmental Paediatrician, Developmental Paediatrics, St George's Hospital, London
Personal pecuniary interests	2008. International Association of Child & Adolescent Psychiatry annual meeting Istanbul April/May 2008 funded by Janssen-Cilag. 2006. Attended advisory board meeting for UCB (Equasym XL) £400 2005. Advisory board meeting relating to modafinil. Cephalon. £2000. 2005 . Advisory board meeting relating to Concerta. Janssen-Cilag. £750. 2002, 2005. Attended advisory board meetings relating to Strattera. Eli Lilly. £750 per meeting.
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	Chair of Specialist Advisory Committee for mental health training for the Royal College of Paediatrics and Child Health; Treasurer and executive member of the British Paediatric Mental Health Group. Member of guideline development group commissioned by DoH on psychoanalytic psychotherapies in the treatment and care of individuals who have experienced sexual abuse, violence, and neglect in childhood. 2007-8.
Ms Christine Merrell	
Employment	Education Specialist, Curriculum, Evaluation and Management Centre,

	Durham University, Durham
Personal pecuniary interests	None
Personal family interests	None
Non-personal pecuniary interests	2007-2010. Evaluation of the impact of teaching and classroom management strategies on severely inattentive, hyperactive, and impulsive young children. Harlow Foundation. _£10,150 2005 – 2008 Department Member of grant on "Can school-based screening and interventions programmes for ADHD improve children's outcomes and access to services? A longitudinal study. Department of Health and Department for Education and Skills._£6,100_ 2005 – 2007 Member of grant "Cost effective smart identification of early attentional problems associated with literacy and numeracy indicators in preschool children". Australian Research Council. £10,000
Personal non-pecuniary interests	2001 - 2004. Member of grant on Screening and interventions for inattentive, hyperactive, and impulsive children; ESRC Award number R000223798. £45,670.
Ms Diane Mulligan	
Employment	Social Inclusion Advisor, Sightsavers International.
Personal pecuniary interests	2006-2007. British Medical Association patient liaison group and Equal Opportunities Committee (£250 reimbursement per day); 2007 Commission for Equality and Human Rights Disability Committee (£250 reimbursement per day)
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	2007 member of AMAZE (Brighton); 2007 member of the National Forum for Organisations of Disabled People Advisory Group; 2007 member of the Brighton and Hove Vocational Forum which works with the Commissioner for Mental Health . 2007. World Health Organisation community based rehabilitation guidelines, specialising in education for disabled chidren (including children with ADHD);
Ms Noreen Ryan	
Employment	Nurse Consultant, Child and Adolescent Mental Health Services, Bolton Hospital NHS Trust, Bolton
Personal pecuniary interests	None
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	2007. Writing a text book for nurses on ADHD with a colleague, manuscript due November 2008, Routledge. 2007. "Non-medical prescribing in CAMHS in the UK". Paper submitted to *Journal of American Psychiatric Nursing*.

	2007 July. 'Nurse prescribing in CAMHS" *Mental Health Practice.* 2007 September. "Non-medical prescribing in ADHD in CAMHS" Mental Health Practice 2006. Nursing assessment chapter in *Child and Adolescent Mental Health Nursing.* 2005 –2006. Expert for NICE technology appraisal of methylphenidate, dextamphetamine and atomoxetine.
Dr Nicola Salt	
Employment	General Practitioner, Thurleigh Road Surgery, London
Personal pecuniary interests	2007 consultant for Nikko healthcare, £8000.
Personal family interests	None
Non-personal pecuniary interests	Pharmaceutical company sponsorship of practice meetings, providing lunch and speaker, up to 10 meetings per year. There have been no companies with an interest in ADHD.
Personal non-pecuniary interests	None
Dr Kapil Sayal	
Employment	Senior Lecturer in Child & Adolescent Psychiatry, Institute of Mental Health and University of Nottingham, Nottingham
Personal pecuniary interests	2005. Funded by Janssen Cilag to attend a conference, £1000. 2003 - co-author of Medscape CME Clinical Update Review, supported by Eli Lilly educational grant. £1000
Personal family interests	None
Non-personal pecuniary interests	2005 – 2008. Can schools-based screening and intervention programmes for ADHD improve children's outcomes and access to services? A longitudinal study. Department of Health, administered by Department for Education and Skills. £106,595. 2004 – 2006. Teacher recognition of hyperactivity: evaluation of a pilot intervention"; South London and Maudsley NHS Trust R&D funding. £37,000.
Personal non-pecuniary interests	2004-2006 Research study and a paper evaluating an educational session about ADHD for teachers. 2007. Chapter on 'Diagnosis and Assessment' in, 'People with Hyperactivity' (Taylor, E.)
Ms Linda Sheppard	
Employment	
Personal pecuniary interests	None
Personal family interests	None
Non-personal pecuniary interests	Janssen-Cilag unrestricted education grant to ADHD in Suffolk, Family Support Group, towards costs of National ADHD conference (£2000)
Personal non-pecuniary interests	None
Dr Geoff Thorley	
Employment	Consultant in Clinical Child and Adolescent Psychology and

	Neuropsychology, Child and Adolescent Mental Health Services, Leicestershire Partnership NHS Trust, Leicester; Private practice, Spire Hospital Leicester
Personal pecuniary interests	None
Personal family interests	None
Non-personal pecuniary interests	None
Personal non-pecuniary interests	Trustee of Cope Children's Charity, Leicester, 2005. author of, "Successful Parenting – A Four Step Approach"
Professor Peter Tymms	
Employment	Professor of Education, Curriculum, Evaluation and Management Centre, University of Durham
Personal pecuniary interests	
Personal family interests	
Non-personal pecuniary interests	2007 director of CEM centre, Durham University which schools buy into. The centre offers ADHD assessments and sells books on ADHD for teachers.
Personal non-pecuniary interests	
Dr Miranda Wolpert (2006-2007)	
Employment	Consultant Clinical Psychologist, Clinical Advisor on Child and Adolescent Mental Health – National Institute of Mental Health/Care Services' Improvement Partnership (England), London.
Personal pecuniary interests	2007. Developing a course on outcomes based CBT at UCL.
Personal family interests	
Non-personal pecuniary interests	
Personal non-pecuniary interests	2006 published "Drawing on the evidence"; 2007 published "Choosing what's best for you"
Professor Ian Wong	
Employment	Professor of Paediatric Medicine Research, Centre for Paediatric Pharmacy Research, The School of Pharmacy, London
Personal pecuniary interests	2007-2008. Director of research at Therakind Ltd., a spin-out company of the School of Pharmacy, University of London, but work is not related to ADHD. 2007-2008. Consultancy fees from Neuropharm Ltd via University of London on work not related to ADHD. 2007. Consultancy fees from Pharmaceutical Development Services, ADHD-related consultancy fees, £500.
Personal family interests	None.
Non-personal	2005 – 2007 Cessation of Attention deficit hyperactivity Disorder Drugs

pecuniary interests	in Young (CADDY). Department of Health, Health Technology Assessment Programme £110,000. 2003–2006. Educational grant to establish a research lecturer for 3 years. Pfizer. £150,000. 2004 – 2006. Tacrolimus Oral Paediatric Preparation Evaluation Research (TOPPER) Fujisawa Ltd, £100,000. 2004 – 2007.Disclofenac Safety and Kinetic in Children post-operation Study (DISKCOS) Rosemont Pharmaceutical Company. £100,000. 2005 – 2008. Electronic Prescribing in Children (EPIC). First Databank, JAC and Great Ormond Hospital for Children. £80,000. 2004 – 2005 Evaluation of concordance in children taking orphan medications. Orphan Europe Ltd. £23,000. 2002 – 2007 National Public Health Career Scientist Award for Children and Adolescent Psychiatric pharmaco-therapy Evaluation research (Department of Health and National Health Service R&D Programme, £330,000. The Department of Practice and Policy of the School of Pharmacy has received funding from several pharmaceutical companies for medicines research, but none related to ADHD. 2006-2007. Staff at the Centre for Paediatric Pharmacy Research gave lectures to psychiatrists, paediatricians and health professionals on "Clinical pharmacology and research of ADHD treatments". These lectures were organized by Janssen Cilag. Honoraria are sent to the School of Pharmacy and no staff received personal honoraria.
Personal non-pecuniary interests	None.
Dr Susan Young	
Employment	Senior Lecturer in Forensic Clinical Psychology, Institute of Psychiatry, Kings' College London, Honorary Consultant Clinical and Forensic Psychologist, Broadmoor Hospital, West London Mental Health Trust
Personal pecuniary interests	Director of Psychology Services Limited - private company providing conference presentations, legal and clinical assessments, psychological treatment and training in these services. 2007. XII International Congress of the European Society for Child and Adolescent Psychiatry; Florence, Italy. Symposium "ADHD: Integrating Treatment Perspectives" Paper presented: Psychotherapy for Patients with ADHD". £1650 speaker fee including expenses paid to Psychology Services Ltd. by Eli Lilly. 2007. Leeds Mental Health Trust Conference "Adult ADHD – An Emerging Challenge" Paper Presented: Forensic Perspective, £150 including expenses paid to Psychology Services Ltd. 2007. Dorset ADHD support group, Weymouth. "Transitions: ADHD across the Lifespan" Paper presented: ADHD Adults £552 including expenses paid to Psychology Services Limited. 2007. University of Iceland Workshop on the Young-Bramham Programme for Adolescents and Adults with ADHD. £1,997.24 paid to Psychology Services Limited including expenses 2006. "The Management of Co-morbidities and Complexities in an ADHD Population", Crawley Paper presented "ADHD and Offending"

	Expenses paid directly to Psychology Services Limited. 2006. Associacao de Psiquiatria Biologica Annual Meeting, Portugal. Paper presented on "ADHD and the Legal Process" Paper presented on "Psychological Treatment" . Expenses paid directly to Psychology Services Limited. 2006. Janssen-Cilag sponsored South West Study Day "Criminal Youth Justice and Forensic Issues" Paper presented "The Impact of ADHD on offending" Expenses paid directly to Psychology Services Limited. 2006. Exeter meeting on forensic issues for people with ADHD. £104 and travel expenses funded by Janssen-Cilag paid directly to Psychology Services Limited.
Personal family interests	None.
Non-personal pecuniary interests	2006. Prevalence of ADHD in young offenders and adult prisoners. Research grant funded by Janssen-Cilag. £45,840. 2004. Unrestricted research grant into ADHD/forensic aspects. Eli-Lilly £5000.
Personal non-pecuniary interests	2007. Young, S.J. & Ross, R. R&R2 for ADHD Youths and Adults: A Prosocial Competence Training Program. Ottawa: Cognitive Centre of Canada (cogcen@canada.com) 2007. Young, S & Bramham, J. *ADHD in Adults, a psychological guide to practice*. Chichester: John Wiley & Sons. "British Pharmacological Guidelines" (Nutt et al, co-author); 2007, presented at ADDISS conference. 2007. Nutt et al. Evidence-based guidelines for management of attention-deficit/hyperactivity disorder in adolescents in transition to adult services and in adults: recommendations from the British Association for Psychopharmacology. *J Psychopharmacol* 2007:21. 10-41.

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Non-personal pecuniary interests	None.
Personal non-pecuniary interests	2008 Muñoz-Solomando, A., Kendall, T. & Whittington, C. J. Cognitive behavioural therapy for children and adolescents: a narrative synthesis of systematic reviews. *Current Opinion in Psychiatry*. (In press) 2007. BBC 1 o'clock News and 6 o'clock News re the Panorama programme on ADHD. 2007. Article in the Daily Mail re ADHD 2007. BBC Panorama programme on ADHD 2007. Daily Telegraph article re ADHD

	2007. Telephone interview for News Hour BBC World Service "Child use of anti-depressants up four-fold" 2006. BBC News at 10 Interviewed in relation to prescribing anti-depressants to children under 4 years. 2006. Interviewed on 'Woman's Hour' on Children's mental health and purported rises in prescribing to children. 2006. Organised and appeared in 'All in the Mind' on Radio 4 on mental health provision for children and young people and NICE guidelines produced to date. 2005. Whittington, C.J., Kendall, T., & Pilling, S. (2005). Are SSRIs and atypical antidepressants safe and effective for children and adolescents? *Current Opinion in Psychiatry*, 18: 21-25.
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Non-personal pecuniary interests	None
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Non-personal pecuniary interests	None
Personal non-pecuniary interests	None
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Other interests related to ADHD	None
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Non-personal pecuniary interests	None
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ADHD	
Personal interests not specifically related to ADHD	None
Non-personal interests	None
Personal non-monetary interests	None
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Personal interests not specifically related to ADHD	None
Non-personal interests	None
Personal non-monetary interests	None
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Other interests related to ADHD	None
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Personal interests not specifically related to ADHD	None
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Personal non-monetary interests	None
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Personal interests not specifically related to ADHD	None
Non-personal interests	None
Personal non-monetary interests	None
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Personal interests not specifically related to ADHD	None
Non-personal interests	None
Personal non-monetary interests	None

Appendix 3: Special advisors to the Guideline Development Group

Ms Mary Sainsbury	Practice Development Manager, Social Care Institute for Excellence
Dr Ilina Singh	Wellcome Trust University Lecturer in Bioethics and Society, London School of Economics
Dr Miranda Wolpert (2007-2008)	Director, CAMHS Evidence Based Practice Unit, University College London and Anna Freud Centre, London

Appendix 4: Stakeholders and reviewers who submitted comments in response to the consultation draft of the guideline

Stakeholders

ADDISS (Attention Deficit Disorder Information and Support Service)
Adults with Attention Deficit Disorder UK (AADD UK)
British Association for Psychopharmacology
British Association of Art Therapists
British Dietetic Association
British Psychological Society, The
Centre for Health Technology Evaluation
College of Mental Health Pharmacists
College of Occupational Therapists
Critical Psychiatry Network
Department of Health
Derbyshire Mental Health Services NHS Trust
Eli Lilly & Company
George Still Forum (National Paediatric ADHD Network Group)
GJ International Ltd
Hyperactive Children's Support Group (HACSG)
Janssen-Cilag Ltd
Learning Assessment & Neurocare Centre
Liverpool ADHD Foundation
Lundbeck Ltd
Medicines and Healthcare products Regulatory Agency (MHRA)
NASUWT (National Association of Schoolmasters Union of Women Teachers)
National Association of EBD Schools
Neonatal & Paediatric Pharmacists Group (NPPG)
Neurodevelopmental Paediatrics
Ofsted
Oxfordshire and Buckinghamshire Mental Health NHS Trust
Royal College of Nursing
Royal College of Nursing
Royal College of Paediatrics and Child Health
Shire Pharmaceuticals Limited
Southampton City Primary Care Trust
Sussex Partnership NHS Trust
Trafford Primary Care Trust
UCB Pharma Ltd
UK Psychiatric Pharmacy Group (UKPPG)
West Dorset Attention and Concentration Group
West London Mental Health NHS Trust
Young Minds

Reviewers
Kusay Hadi
Jonathan Leo
Michael Rutter

Appendix 5: Researchers contacted to request information about unpublished or soon-to-be published studies

Dr Albert Allen
Professor Gene Arnold
Professor Michael Schlander

Appendix 6: Clinical questions

1. DIAGNOSIS

Diagnosis and assessment		
1.1	1.1.1 1.1.2 1.1.3 1.1.4	Is there a consistent pattern of signs and symptoms demarcating ADHD from other disorders? ▪ is this pattern associated with clinically meaningful impairment? ▪ is this pattern of signs and symptoms the same in children than in adults? ▪ can the clinical features and impairments of ADHD be distinguished from another diagnosis? *to consider: (associated disorders)* - conduct disorder & oppositional defiant disorder & antisocial - obsessive compulsive disorder - bipolar disorder - affective disorders & anxiety disorders - premorbid impairments in schizophrenia - personality disorders (borderline) - Tourette's syndrome - global learning disorder - specific learning disorder (e.g. dyslexia, dyscalculia) - attachment disorder - autistic spectrum disorders - alcohol/drug abuse

1.2		Does ADHD have a characteristic course?

1.3	 1.3.1 1.3.2 1.3.3	Is there any evidence of: ▪ heritability of ADHD from family and genetic studies? ▪ neurobiological underpinning of ADHD? *to consider:* - neurotransmitters - brain structure (MRI) and function (fMRI/ERP) is the neurobiological evidence linked to core signs/symptoms?

1.4		Is there evidence of the social context (environmental, familial [not including genetics] and/or educational factors) influencing ADHD?

1.5		Is there evidence of over/under-diagnosis in some groups? *to consider:*

		- 3 sub-types of ADHD + Hyperkinetic Disorder - age groups - gender - socio-economic status - ethnicity - country - forensic settings - alcohol/drug users - looked after children - learning disabilities

1.6	1.6.1 1.6.2 1.6.3 1.6.4 1.6.5	What is the most reliable way of diagnosing the three sub-types of ADHD plus Hyperkinetic Disorder? ▪ should the diagnosis be given by specialists only? ▪ what is the minimum required assessment for a diagnosis to be given? ▪ should sub-typing be based on cross-sectional assessment of symptoms only (e.g. last 6 months) or also consider sub-type at onset? ▪ is the diagnostic approach different in adults compared to children?

1.7		What are the criteria that trigger the use of this guideline (i.e. which children, young people and adults should be included in this guideline and which should not)? ▪ (severity of symptoms)

2. PSYCHOLOGICAL AND COMBINED INTERVENTIONS

No.	Question
Treatment effectiveness, choice and moderating factors	
2.1	For people with ADHD, do

	a) psychological interventions:[1] ▪ Cognitive training ▪ CBT ▪ Behavioural approaches / parent (effectiveness) training ▪ Multimodal interventions b) other approaches: ▪ biofeedback ▪ physical therapies (relaxation etc) ▪ other approaches	when compared to: ▪ no intervention ▪ waiting lists ▪ 'standard care' ▪ other psychological interventions ▪ medication for ADHD	produce harm/benefits on the desired outcomes* and does this depend on: ▪ ADHD subtype ▪ associated disorder ▪ social context ▪ age ▪ gender ▪ severity ▪ delivery systems (group / indiv., family / group of fam., manualised or not, student vs. specialist, rater)? * ADHD symptoms / associated mental health problems / peer relationships / school learning and progress / family relationships / quality of life / burden of care (in write-up: care needs), self-esteem **Plus additional outcomes agreed as relevant to psychological interventions for ADHD**
2.2	Is the use of more that one type of psychological therapy more effective than single therapies (including psychological interventions with the child combined with parent interventions)?[2]		

[1] The clinical questions originally listed: family therapy (systemic/psychodynamic, behavioural); CBT (individual behaviour therapy, individual cognitive therapy, environmental manipulation & management.

2.3	Is there evidence of the added value in terms of benefits/harm from combined treatment (medication for ADHD plus psychological interventions)?[3] ▪ medication for ADHD + psychological intervention vs. medication for ADHD only ▪ medication for ADHD + child psychological intervention vs. medication for ADHD + parent-training intervention ▪ medication for ADHD + psychological intervention vs. psychological intervention ▪ parent-training + child psychological intervention (or multimodal psych intervention) vs. medication for ADHD
Treatment decisions: Initiation, duration, discontinuation and effect evaluation	
2.4	When should psychological treatment be initiated? ▪ does the waiting for a treatment influence outcome?
2.5	What is the optimum duration of treatment? ▪ what are the long-term consequences of treatment?
2.6	What is the most effective first line treatment and under what circumstances (e.g. epilepsy, potential for misuse, tics, Tourette syndrome, etc.)? ▪ what is the recommended order of combined treatments?
Adherence	
2.7	What approaches can be used to optimise adherence with psychological treatment?

[2] Inserted in place of question under *Interventions for carers*: 'Is there evidence on: the effectiveness of combined therapies compared to a single therapy?'

[3] Separate section for clinical questions on combined interventions deleted and combination comparisons rationalised to fit the scheme for psychological interventions (combinations of drugs to be dealt with in pharma. questions).

3. INTERVENTION FOR CARERS

No.	Question
3.1	Are there interventions that improve the well-being of parents/carers and may provide an indirect benefit for the child, but where evidence on outcomes for the child with ADHD is not available (peer support groups, counselling, advice/information and guidance?[4]

4. PHARMACOLOGICAL INTERVENTIONS

No.	TG	Question
Drug effectiveness, choice and moderating factors		
4.1		For people with ADHD, does

[4] The clinical questions originally listed the following interventions for carers: psychoeducational interventions (advice/information, parental guidance); parent effectiveness training; counselling; CBT – however, as parent training interventions are behavioural interventions these are addressed in clinical question 2.1. The section on interventions for carers will address other interventions with carers where the aim is to improve the wellbeing of the parents/carers and where effectiveness is measured by parental outcomes. This is outside the scope of the guideline and will be addressed by a (brief) narrative overview of the types of intervention available and evidence on their effectiveness.

		drug treatment* ▪ methylphenidate (including modified-release preparations) ▪ atomoxetine ▪ dexamphetamine ▪ tricyclic and other antidepressants ▪ bupropion ▪ nicotine (as skin patches) ▪ atypical antipsychotics ▪ modafinil ▪ clonidine	when compared to: ▪ waiting lists ▪ placebo ▪ other drug (head to head trials) ▪ psychological interventions ▪ parent training	produce harm/benefits on the desired outcomes* and does this depend on: ▪ ADHD subtype ▪ associated disorder ▪ social context ▪ age ▪ gender ▪ severity ▪ delivery systems (group/individual, family/group of families, manualised or not, student versus specialist, rater)? * ADHD symptoms/associated mental health problems/peer relationships/school learning and progress/family relationships/quality of life/burden of care (in write-up: care needs), self-esteem
Treatment decisions: Duration, discontinuation and effect evaluation				
4.2		Which drugs should be used as a 1st line, 2nd line, etc. treatment? How should drug treatment be initiated, dose titrated and effectiveness evaluated? What is the optimum duration of drug treatment* (length of time; continuous vs. intermittent treatment) and ▪ when is discontinuation attempted? ▪ what advice is given for discontinuation?		
4.3		Is there any evidence on: ▪ what is the most effective type of drug administration (to improve adherence) and ▪ what is the dose optimisation and how is this best achieved (where outcome is optimal)?		
Side effects, monitoring, precautions and abuse potential				
4.4		What conditions contraindicate or caution the use of specific drug		

		treatments? What are the necessary baseline investigations and on-going monitoring to support drug treatment? What are the side effects of drug treatments (including abuse potential)? What action should be taken in response to side-effects? What action should be taken in response to lack of effectiveness?
4.5		What are the risks of prescribing drug treatment in the presence of recreational drug use and/or alcohol use and ▪ what approaches should be taken if in the presence of recreational drug use and/or alcohol use?
Education, adherence and shared-care		
4.6		How is drug treatment monitored and ▪ by who(by specialist, by GP and/or by care coordinator)?
4.7		What approaches to drug treatment can be used to support drug adherence? ▪ are there any interventions that can improve adherence when initiating drug treatment? ▪ when there are problems regarding adherence to drug treatment in people with ADHD are there any interventions that can improve adherence with medication?

3. EDUCATION

No.	TG	Question		
Education				
6.1		Does educational intervention* ▪ school screening ▪ teacher training on ADHD ▪ curriculum modification ▪ classroom management ▪ remedial teaching ▪ a multi-agency partnership between schools and other agencies	when compared to: ▪ standard education ▪ health interventions	produce harm/benefits on the desired outcomes* and does this depend on: ▪ ADHD subtype ▪ associated disorder ▪ social context ▪ age ▪ gender ▪ severity * Behaviour in classroom, academic achievement and progress, attitude to school, teachers' quality of life, self-esteem, behaviour and employment.