Issue date: March 2006
Review date: March 2009

NHS
National Institute for Health and Clinical Excellence

Quick reference guide

Methylphenidate, atomoxetine and dexamfetamine for attention deficit hyperactivity disorder (ADHD) in children and adolescents

NOTE: This guidance replaces *Technology appraisal guidance* no. 13 issued in October 2000.

The Institute reviews each piece of guidance it issues. Following review and re-appraisal, the previous recommendations on the use of methylphenidate for attention deficit hyperactivity disorder in childhood have been updated and extended. This latest guidance provides recommendations on the use of methylphenidate, atomoxetine and dexamfetamine for the treatment of attention deficit hyperactivity disorder in children and adolescents.

1 Guidance

1.1 Where drug treatment is considered appropriate, methylphenidate, atomoxetine and dexamfetamine are recommended, within their licensed indications, as options for the management of ADHD in children and adolescents.

1.2 The decision regarding which product to use should be based on the following:

- the presence of comorbid conditions (for example, tic disorders, Tourette's syndrome, epilepsy)
- the different adverse effects of the drugs
- specific issues regarding compliance identified for the individual child or adolescent, for example problems created by the need to administer a mid-day treatment dose at school
- the potential for drug diversion (where the medication is forwarded on to others for non-prescription uses) and/or misuse
- the preferences of the child/adolescent and/or his or her parent or guardian.

1.3 If there is a choice of more than one appropriate drug, the product with the lowest cost (taking into account the cost per dose and number of daily doses) should be prescribed.

1.4 Drug treatment should only be initiated by an appropriately qualified healthcare professional with expertise in ADHD and should be based on a comprehensive assessment and diagnosis. Continued prescribing and monitoring of drug therapy may be performed by general practitioners, under shared care arrangements.

2 Implementation

2.1 Implications for the NHS

2.1.1 Prescribing of stimulant drugs for ADHD has steadily increased in recent years. In 1998 there were approximately 220,000 prescriptions in England for stimulant drugs (methylphenidate and dexamfetamine) at a net ingredient cost of about £5 million; in 2004 the number of prescriptions for these drugs had almost doubled to 418,300 at a cost of almost £13 million. In 1998 there were no licensed modified-release formulations of methylphenidate, and the use of unlicensed formulations accounted for only a tiny proportion of stimulant prescriptions. In 2004, modified-release formulations accounted for 54% of all methylphenidate prescriptions and 79% of the total net ingredient costs for this drug. Atomoxetine was licensed in the UK in

Technology Appraisal 98

This guidance is written in the following context

This guidance represents the view of the Institute, which was arrived at after careful consideration of the available evidence. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

May 2004. In 2004 there were approximately 15,500 prescriptions for atomoxetine in England at a cost of £1.2 million. It is not anticipated that this guidance will result in a major increase over current trends in the rate of prescribing for ADHD.

2.1.2 Atomoxetine and the modified-release formulations of methylphenidate are more expensive than immediate-release formulations of dexamfetamine and methylphenidate. The costs associated with treatment monitoring are likely to be highest during the initial titration stages as doses are adjusted. The immediate-release formulations are often used at this stage because of the greater flexibility in dosage increments.

2.1.3 This guidance is not likely to have a significant impact on other resources. However, any increase in the uptake of modified-release methylphenidate and once-daily atomoxetine regimens may reduce the need to administer in-school doses of immediate-release methylphenidate and dexamfetamine.

2.2 Local implementation and audit

2.2.1 NHS organisations that offer treatment for children and adolescents with ADHD and general practitioners should review their current practice and policies to take account of the guidance set out in Section 1 of the full guidance.

2.2.2 Local guidelines, protocols or care pathways that refer to the care of children and adolescents with ADHD should incorporate the guidance.

2.2.3 To measure compliance locally with the guidance, the following criteria could be used. Further details on suggestions for audit are presented in Appendix C of the full guidance.

- Drug treatment for a child or adolescent with ADHD is initiated only by an appropriately qualified healthcare professional with expertise in ADHD, and is based on a comprehensive assessment and diagnosis.
- Where drug treatment is considered appropriate, methylphenidate, atomoxetine or dexamfetamine is offered, within licensed indications, as an option in the management of ADHD in a child or adolescent.
- The decision regarding which product to use considers the following:
  - the presence of comorbid conditions
  - the different adverse effects of the drugs
  - specific issues regarding compliance identified for the individual child or adolescent
  - the potential for drug diversion and/or misuse
  - the preferences of the child or adolescent and/or his or her parent or guardian.
- If there is a choice of more than one appropriate drug, the drug with the lowest cost is prescribed.

2.2.4 Further details on criteria for audit are included in the full guidance (see 'Further information'). More information about implementation of NICE guidance is available from www.nice.org.uk/implementation

Further information

Quick reference guide

This has been distributed to healthcare professionals working in the NHS in England and Wales (see www.nice.org.uk/TA098distributionlist). It is available from www.nice.org.uk/TA098quickrefguide

For printed copies, phone the NHS Response Line on 0870 1555 455 (quote reference number N1010).

Full guidance

This contains the following sections:

1 Guidance; 2 Clinical need and practice; 3 The technology; 4 Evidence and interpretation; 5 Recommendations for further research; 6 Implications for the NHS; 7 Implementation and audit; 8 Related guidance; 9 Review of guidance.

The full guidance also gives details of the Appraisal Committee, the sources of evidence considered and suggested criteria for audit. It is available from www.nice.org.uk/TA098guidance

Information for the public

Information for children and adolescents with attention deficit hyperactivity disorder, their families and the public is available from www.nice.org.uk/TA098publicinfo

For printed copies, phone the NHS Response Line on 0870 1555 455 (quote reference number N1011).

Related guidance

For information about NICE guidance that has been issued or is in development, see the website (www.nice.org.uk).

NICE is in the process of developing the following guidance.

- Attention deficit hyperactivity disorder: pharmacological and psychological interventions in children, young people and adults. *NICE clinical guideline*.
- Parent-training/education programmes for children with conduct disorders. *NICE technology appraisal guidance*.

Published by the National Institute for Health and Clinical Excellence, March 2006; ISBN 1-84629-181-X

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N1010 1P 30k March 2006