Guideline for the Treatment of Attention Deficit Hyperactivity Disorder (ADHD) in Children & Young People (CYP)

This guidance covers the diagnosis and management of ADHD in children & young people only.

1. Identification and referral[1]

When a child or young person presents in primary care with behavioural and/or attention problems suggestive of ADHD, primary care practitioners should determine the severity of the problems, how these affect the child or young person and the parents or carers, and the extent to which they pervade different domains and settings.

A period of watchful waiting for up to 10 weeks can be considered for children & young people, with behavioural and/or attention problems suggestive of ADHD, that are having an adverse impact on their development or family life. If the behavioural and/or attention problems persist with at least moderate impairment, or are associated with severe impairment, the child or young person should be referred to a specialist (that is, a child psychiatrist, paediatrician, or other appropriately qualified registered healthcare professional with training and expertise in the diagnosis of ADHD) for assessment. Primary care practitioners should not make the initial diagnosis or start medication in children or young people with suspected ADHD.

It is important that the expectations of the patient and their family/ carer are managed at the point of referral; it should be made clear that medication is not the first line treatment for children & young people diagnosed with ADHD.

2. Diagnosis[1]

A diagnosis of ADHD should only be made by a specialist psychiatrist, paediatrician or other appropriately qualified registered healthcare professional with training and expertise in the diagnosis of ADHD, on the basis of:

- a full clinical and psychosocial assessment of the patient has been conducted; this included discussion about behaviour and symptoms in the different domains and settings of the person's everyday life **and**
- a full developmental and psychiatric history has been taken **and**
- observer reports and assessment (for example, at school) of the person's mental state were used as part of the diagnostic assessment.

The patient's ADHD, symptoms of hyperactivity/impulsivity and/or inattention:

- meet the diagnostic criteria in DSM-5 or ICD-11 (hyperkinetic disorder; but exclusion based on a pervasive developmental disorder, or an uncertain time of onset is not recommended) **and**
- cause at least moderate psychological, social and/or educational or occupational impairment based on interview and/or direct observation in multiple settings **and**
- are pervasive, occurring in 2 or more important settings including social, familial, educational and/or occupational settings.

The diagnostic process should include an assessment of the patient's needs, coexisting conditions, social, familial and educational or occupational circumstances and physical

health. For children and young people, there should also be an assessment of their parents' or carers' mental health.

3. Management[1]

Patients with ADHD should have a comprehensive, holistic shared treatment plan that addresses psychological, behavioural and educational needs.
Consider:

- the severity of ADHD symptoms and impairment, and how this affects everyday life (including sleep).
- the patient's goals.
- their resilience and protective factors.
- the relative impact of other neurodevelopmental or mental health conditions.

a. Non-pharmacological treatment

In children aged under 5 years, an ADHD-focused parent-training programme that teaches parents or carers behaviour therapy techniques is recommended as first-line treatment. Norfolk Positive Behaviour Strategies (PBS) is a programme for families of children with additional needs and is available free online. PBS produced by our partners Norfolk Community Health and Care and Family Action, was originally developed to give group support to families of children who had been referred for assessment by a specialist team. This course will help parents think about the messages a child is trying to communicate and provides some practical skills and strategies to help parents manage the child in a positive way.
Specialist advice, from a service with expertise in managing ADHD in young children (ideally a tertiary service), should be sought if symptoms are still causing **significant impairment** after completion of a parent-training programme and implementation of environmental modifications.

In children aged 5 years and over, advice about ADHD and ADHD-focused support should be given to all parents or carers. In children with ADHD and symptoms of oppositional defiant disorder or conduct disorder, a training programme specific for the coexisting condition, involving either the parent or carer with or without the child is also recommended. Psychoeducation should be the first-line intervention; educating the family/patient about ADHD will ensure a more successful outcome. Drug treatment should be reserved for children whose symptoms are causing **persistent** and **significant impairment** of at least one area of function (such as interpersonal relationships, education attainment and risk awareness) despite completion of **psychoeducation** and **environmental modifications**.

Environmental modifications are changes that are made to the physical environment to minimise the impact of a person's ADHD on their day-to-day life[1]. Appropriate environmental modifications will be specific to the circumstances of each person with ADHD and should be determined from an assessment of their needs[1].
Examples include[1]:

- changes to seating arrangements at school,
- changes to lighting and noise,
- reducing distractions (for example, using headphones),

- optimising work or education to have shorter periods of focus with movement breaks (including the use of 'I need a break' cards),
- reinforcing verbal requests with written instructions
- for children the appropriate use of teaching assistants at school.

Family Action provide a Norfolk and Waveney ADHD/ Autism Spectrum Disorder (ASD) Support Service. This service offers support to parents of children and young people in Norfolk & Waveney who are waiting for assessment by a Neurodevelopmental Service. It also offers support to parents of children who have been diagnosed with ADHD or ASD. Parents can access workshops, support groups, courses and individual support and advice in matters relating to their child's needs.

The non-pharmacological treatment offer will be reviewed as part of larger piece of work on pre-diagnostic support for patients.

b. Pharmacological treatment

Treatment options for ADHD are not licensed for use in children under 6 years of age.

Children & young people should only be offered medication if the following criteria are met:

- a baseline assessment has been carried out.
- patient and their family/ and carers have discussed information about ADHD (see below – planning treatment)
- patient has completed **psychoeducation** and **environmental modifications** have been implemented and reviewed.
- ADHD symptoms are still causing a **persistent significant impairment** in at least one domain.

Medication for ADHD should only be initiated by a specialist (who is a registered healthcare professional) with training and expertise in diagnosing and managing ADHD.
Registered healthcare professionals initiating medication for ADHD should:

- be familiar with the pharmacokinetic profiles of all the short- and long-acting preparations available for ADHD.
- ensure that treatment is tailored effectively to the individual needs of the child or young person.
- take account of variations in bioavailability or pharmacokinetic profiles of different preparations to avoid reduced effect or excessive adverse effects.

4. Planning treatment – to be completed by specialist

Before starting any treatment for ADHD, the following must be discussed with the child/ young person and their family or carers as appropriate:

- the benefits and possible harms of both non-pharmacological and pharmacological treatments (e.g., potential for side effects with medication, and non-response rates).
- the benefits of a healthy lifestyle including exercise and a balanced nutritious diet.
- their preferences in relation to treatment and their concerns.
- how other mental health or neurodevelopmental conditions might affect treatment choices.
- the importance of adherence to treatment and any factors that may affect this e.g., taking medication at school.

5. Baseline assessment – to be completed by specialist

Before starting medication for ADHD the patient should have a full assessment, which should include:

- a review to confirm they continue to meet the criteria for ADHD; the patient must have **persistent significant impairment** in at least one domain despite completion of **psychoeducation** and implementation of **environmental modifications**.
- a review of mental health and social circumstances, including:
  - presence of coexisting mental health and neurodevelopmental conditions.
  - current educational or employment circumstances.
  - risk assessment for substance misuse and/or drug diversion.
  - care needs.
- a review of physical health, including:
  - a medical history, considering conditions that may be contraindications for specific medicines.
  - current medication.
  - height and weight (measured and recorded against the normal range for age, height and sex).
  - baseline pulse and blood pressure* (measured with an appropriately sized cuff and compared with the normal range for age).
  - a cardiovascular assessment.

* Refer to a paediatric hypertension specialist before starting medication for ADHD if blood pressure is consistently above the 95th centile for age and height for children and young people.

An electrocardiogram (ECG) is not needed before starting stimulants, atomoxetine or guanfacine, unless the person has any of the features listed below (see Refer to Cardiology below), or a co-existing condition that is being treated with a medicine that may pose an increased cardiac risk.

Refer to Cardiology for opinion before starting medication for ADHD if any of the following apply:

- history of congenital heart disease or previous cardiac surgery.
- history of sudden death in a first-degree relative under 40 years suggesting a cardiac disease.
- shortness of breath on exertion compared with peers.
- fainting on exertion or in response to fright or noise.
- palpitations that are rapid, regular and start and stop suddenly (fleeting occasional bumps are usually ectopic and do not need investigation).
- chest pain suggesting cardiac origin.
- signs of heart failure.
- a murmur heard on cardiac examination.

6. Medication choice

The pharmacological treatment options for ADHD named within this guidance are not licensed for use in children under 6 years of age.

Medications are licensed for the treatment of ADHD in children aged 6 years of age and over as part of a comprehensive treatment programme that includes psychological, behavioural, educational advice and interventions for both the patient and their family/carer.

To initiate medication the patient must have **persistent significant impairment** in at least one domain despite completion of **psychoeducation** and implementation of **environmental modifications.**

The medications covered in this guidance for the treatment of ADHD in children & young people are:

- Stimulants – Methylphenidate, Lisdexamfetamine & Dexamfetamine
- Non- stimulants - Atomoxetine and Guanfacine

As per NICE guidance (NG87) **methylphenidate** should be offered as the first line pharmacological treatment for children and young people with ADHD.
Modified-release preparations of methylphenidate are preferred because of their pharmacokinetic profile, convenience, improved adherence and reduced risk of drug diversion. Immediate-release preparations can be given when more flexible dosing regimens are required, or during initial dose titration. For younger children starting with immediate release methylphenidate may be more appropriate. A combination of a modified-release and immediate-release preparation taken at different times of the day can be used to extend the duration of effect. The magnitude, duration of effect, and side-effects of stimulants vary between patients.[2] Start at the appropriate dose for the child's age as per the BNFC, & increase as appropriate according to response to the minimum effective dose.

Consider switching to **lisdexamfetamine** if after a 6-week trial of methylphenidate (at an adequate dose) there has not been sufficient benefit observed, in terms of reduced ADHD symptoms and associated impairment.

Dexamfetamine can be considered for children & young people whose ADHD symptoms are responding to lisdexamfetamine, but who cannot tolerate the longer effect profile of the drug. Please note dexamfetamine is only licensed to treat ADHD in children and young people aged 6 to 17 years when response to methylphenidate is clinically inadequate.

The non-stimulants **atomoxetine** or **guanfacine** can be offered to children and young people if:

- they cannot tolerate methylphenidate or lisdexamfetamine **or**
- their symptoms have not responded to separate 6-week trials of methylphenidate and lisdexamfetamine, having considered alternative preparations and adequate doses.

If sustained orthostatic hypotension or fainting episodes occur with guanfacine treatment, the dose should be reduced, or an alternative treatment offered.

If there is a choice of more than one appropriate formulation of a drug, the product that is the most cost-effective should be prescribed.

Specialist who initiated treatment to obtain a second opinion or refer to a community specialist ADHD service if ADHD symptoms in a child or young person are unresponsive to one or more stimulant drugs (e.g. methylphenidate and lisdexamfetamine) and one non-stimulant drug (e.g. atomoxetine and guanfacine).

A course of cognitive behavioural therapy (CBT) can be considered for young people with ADHD who have benefited from medication but whose symptoms are still causing a significant impairment in at least one domain, addressing the following areas:

- social skills with peers
- problem-solving
- self-control
- active listening skills
- dealing with and expressing feelings

7. Specialist prescribing and initial monitoring responsibilities

The specialist will be responsible for initiation, dose titration and stabilisation of medication. This will be for **at least two consecutive consultations with no change in dose**.

The specialist will provide relevant age-appropriate information to the patient and their family/ carer about the risks and benefits of pharmacological treatment.

The specialist will ensure that the patient has an adequate supply of medication. Prescribers should be familiar with the requirements of controlled drug legislation governing the prescription and supply of stimulants.

Monitoring at baseline and during initiation is the responsibility of the specialist; only once the patient is optimised on the chosen medication with no anticipated further changes expected can prescribing and monitoring be transferred to primary care via a shared care agreement.

Refer to the relevant **shared care agreement** for further detailed information on the specialists prescribing and monitoring responsibilities.

8. Shared Care

As per NICE guidance (NG87) **after** titration and dose stabilisation, prescribing and monitoring of ADHD medication can be carried out under Shared Care arrangements with primary care. Norfolk & Waveney currently have shared care agreements in place for the following medications, for use in children & young people aged 6 years and over with a diagnosis of ADHD:

- Stimulants – Methylphenidate, Lisdexamfetamine & Dexamfetamine
- Atomoxetine
- Guanfacine

The shared care agreements can be accessed online at the KnowledgeNoW website.

Transfer of monitoring and prescribing to primary care is normally after at least 12 weeks, and when the patient's dose has been optimised, and with satisfactory investigation results for at least 4 weeks. The specialist will write to the patient's GP to request shared care. A copy of the diagnostic report and evidence of observations gathered from other settings, such as school, should be included. It should be clear to primary care which drug treatment has been initiated (drug name, and brand name if applicable), the formulation, the dose, the frequency and the date from which treatment would need to be prescribed.

For **Right to Choose providers** on the **Norfolk & Waveney Neurodevelopmental Disorder (NDD) Provider Framework** the 'ADHD Shared Care Request Letter' should be completed and sent to the patient's GP. A copy of the diagnostic report and evidence of

observations gathered from other settings, such as school, will also need to be submitted with the Shared Care Request Letter.

The specialist will ensure that the patient has an adequate supply of medication (usually 28 days) until shared care arrangements are in place.

The specialist will issue further prescriptions if, for unforeseen reasons, arrangements for shared care are not in place at the end of 28 days. **Patients should not be put in a position where they are unsure how to obtain supplies of their medication**.

9. Primary Care prescribing & monitoring responsibilities

To accept shared care when patient is on a 'stable' dose and evidence of benefit is stated. To prescribe treatment from the date specified by specialist.

Requests to prescribe outside of normal clinical practice and/or local guidelines and formulary should be challenged regardless of the source of the request.

Prescribers should be familiar with the requirements of controlled drug legislation governing the prescription and supply of stimulants.

Refer to the relevant shared care agreement for detailed information on primary care prescribing and monitoring responsibilities.

10. Annual review with specialist

To establish continued need for medication the specialist should review the ADHD medication at least once a year. They should discuss with the person with ADHD (and their families and carers as appropriate) whether medication should be continued. The review should include a comprehensive assessment of the[1]:

- preference of the child or young person with ADHD (and their family or carers as appropriate)
- benefits, including how well the current treatment is working throughout the day.
- adverse effects
- clinical need and whether medication has been optimised.
- impact on education and/or employment
- effects of missed doses, planned dose reductions and periods of no treatment.
- effect of medication on existing or new mental health, physical health or neurodevelopmental conditions
- need for support and type of support (for example, psychological, educational, social) if medication has been optimised but ADHD symptoms continue to cause a significant impairment.

Drug treatment should only be continued for as long as it is clinically effective. Trials of treatment-free periods, or dose reductions should be considered where appropriate and be managed by the specialist. If the decision is made to continue medication, the reasons for this should be documented.

Children & young people should be monitored for effectiveness of treatment and side-effects, in addition to changes in sleep pattern, and the potential for stimulant diversion or misuse. If the child develops new, or has worsening of existing seizures, review drug treatment and stop any drug that might be contributing to the seizures; treatment can be cautiously reintroduced if it is unlikely to be the cause. Monitor children for the development of tics associated with stimulant use. If tics are stimulant related, consider a dose reduction,

stopping treatment, or changing to a non-stimulant drug. If there is worsening of behaviour, consider adjusting drug treatment and reviewing the diagnosis.
When conducting treatment reviews the specialist will send a written summary of the consultation to the patient's GP.

11. Transition planning[3]

Young people move from children to adult health services usually between the ages of 16 and 18. It is important to start planning the move from children's health services to adult health services around the age of 14. All children's and adults' services should give children, young people and their parents/carers information about what to expect from services during transition and what support is available. This information should be given before care moves across to adult teams so that young people and their parents/carers can familiarise themselves with the pathway.

References

1. National Institute for Health and Care Excellence (NICE) Guideline NG87. Attention deficit hyperactivity disorder: diagnosis and management. [Updated13 September 2019]. Available from: Attention deficit hyperactivity disorder: diagnosis and management (nice.org.uk)

2. British National Formulary for Children (BNFC). Attention deficit hyperactivity disorder, treatment summary. [Updated 28/02/24]. Available from: Attention deficit hyperactivity disorder | Treatment summaries | BNFC | NICE

3. Norfolk County Council. Transition between children's & adult health services. Available from: Introduction - Norfolk County Council

Appendix 1: Prescribing pathway

Medications are licensed for the treatment of ADHD in children aged 6 years of age and over as part of a comprehensive treatment programme that includes psychological, behavioural, educational advice and interventions for both the patient and their family/ carer.

To initiate medication the patient must have **persistent significant impairment** in at least one domain despite completion of **psychoeducation** and implementation of **environmental modifications**.

Methylphenidate should be offered as first line pharmacological treatment.

Modified-release preparations are preferred because of their pharmacokinetic profile, convenience, improved adherence and reduced risk of drug diversion.

Start at the appropriate dose for the child's age as per the BNFC, & increase as appropriate according to response to the minimum effective dose.

Effective management of symptoms with minimal side effects.

Specialist is responsible for the initiation, dose titration and stabilisation of medication. This will be for at least two least two consecutive consultations with no change in dose.

Once drug has been titrated and stabilised to the minimum effective dose prescribing can be transferred to primary care, in line with Norfolk & Waveney shared care guidelines. Transfer of monitoring and prescribing to primary care is normally after at least 12 weeks.

The specialist will ensure that the patient has an adequate supply of medication (usually 28 days) until shared care arrangements are in place.

For **Right to Choose providers** on the **Norfolk & Waveney NDD Provider Framework** the 'ADHD Shared Care Request Letter' should be completed and sent to the patient's GP. A copy of the diagnostic report and evidence of observations gathered from other settings, such as school, will also need to be submitted with the Shared Care Request Letter.

To establish continued need for medication the specialist should review the ADHD medication at least **once a year**. Drug treatment should only be continued for as long as it is clinically effective.

If after a 6-week trial of methylphenidate (at an adequate dose) there has not been sufficient benefit observed, in terms of reduced ADHD symptoms and associated impairment – consider switching to **lisdexamfetamine.**

Stop methylphenidate and prescribe lisdexamfetamine.

Start at the appropriate dose for the child's age as per the BNFC, & increase as appropriate according to response to the minimum effective dose.

Dexamfetamine can be considered for CYP whose ADHD symptoms **are responding** to lisdexamfetamine, but who cannot tolerate the longer effect profile of the drug.

For these patient's **stop lisdexamfetamine** and prescribe dexamfetamine.

Start at the appropriate dose for the child's age as per the BNFC. Increase as appropriate according to response to minimum effective dose.

The non-stimulants **atomoxetine** or **guanfacine** can be offered to children and young people if:

- they cannot tolerate methylphenidate or lisdexamfetamine **or**
- their symptoms have not responded to separate 6-week trials of methylphenidate and lisdexamfetamine, having considered alternative preparations and adequate doses.

Start at the appropriate dose for the child's age as per the BNFC.

Document history:

Version	Date	Author / Editor	Status	Comment
0.1	March 2024	N.C, MO Team	Draft	New document
0.2	April 2024	N.C, MO Team	Draft	Transition planning information added. Examples of environmental modifications listed. Addition of prescribing pathway in appendix 1.
0.3	June 2024	N.C, MO Team	Draft	Link added to Family Action webpage. 'To be completed by specialist' added after subtitle 'Planning treatment' in section 4. In section 6 addition of the line 'Specialist who initiated treatment to' so that it is clear it is the responsibility of the specialist to seek second opinion or onward referral if patient is unresponsive to one or more stimulant drugs, and one non-stimulant drug.