Attention deficit hyperactivity disorder: diagnosis and management

NICE guideline: short version

Draft for consultation, September 2017

This guideline covers diagnosing and managing attention deficit hyperactivity disorder (ADHD) in children, young people and adults. This includes people with:

- a defined neurological disorder
- a mental health condition
- another neurodevelopmental disorder.

Who is it for?

- people using services, their families and carers and the public
- primary, community and secondary health and social care professionals who care for children, young people and adults with ADHD

This guideline will update and replace NICE guideline CG72 (published September 2008).

We have updated or added new recommendations on recognition, information and support, managing ADHD (including non-pharmacological treatment), medication, follow-up and monitoring, adherence, and review of medication and discontinuation.

You are invited to comment on the new and updated recommendations in this guideline. These are marked as **[2018]**.

You are also invited to comment on recommendations that NICE proposes to delete from the 2008 guideline.

We have not updated recommendations shaded in grey, and cannot accept

comments on them. In some cases, we have made minor wording changes for clarification. These are indicated by yellow highlighting.

See Update information for a full explanation of what is being updated.

This version of the guideline contains:

- the draft recommendations
- rationale and impact sections that explain why the committee made the 2018 recommendations and how they might affect practice
- the guideline context
- recommendations for research.

Information about how the guideline was developed is on the guideline's page on the NICE website. This includes the evidence reviews, the scope, and details of the committee and any declarations of interest.

The supporting information and evidence for the 2018 recommendations is contained in the evidence reviews for the 2018 guideline. Evidence for the 2016 recommendations is in the 2016 addendum. Evidence for the 2008 recommendations is in the full version of the 2008 guideline.

Contents

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Service organisation and training

Service organisation

1.1.1 People with attention deficit hyperactivity disorder (ADHD) would benefit from improved organisation of care and better integration of paediatric, child and adolescent mental health services (CAMHS) and adult mental health services. **[2008]**

1.1.2 Mental health services for children, young people and adults, and child health services, should form multidisciplinary specialist ADHD teams and/or clinics for children and young people and separate teams and/or clinics for adults. These teams and clinics should have expertise in the diagnosis and management of ADHD, and should:

- provide diagnostic, treatment and consultation services for people with ADHD who have complex needs, or where general psychiatric services are in doubt about the diagnosis and/or management of ADHD
- put in place systems of communication and protocols for information sharing among paediatric, child and adolescent, forensic, and adult mental health services for people with ADHD, including arrangements for transition between child and adult services
- produce local protocols for shared care arrangements with primary care providers, and ensure that clear lines of communication between primary and secondary care are maintained

- ensure age-appropriate psychological services are available for children, young people and adults with ADHD, and for parents or carers.

The size and time commitment of these teams should depend on local circumstances (for example, the size of the trust, the population covered and the estimated referral rate for people with ADHD). **[2008, amended 2018]**

1.1.3 Every locality should develop a multi-agency group, with representatives from multidisciplinary specialist ADHD teams, paediatrics, mental health and learning disability trusts, forensic services, child and adolescent mental health services (CAMHS), the Directorate for Children and Young People (DCYP) (including services for education and social services), parent support groups and others with a significant local involvement in ADHD services. The group should:

- oversee the implementation of this guideline
- start and coordinate local training initiatives, including the provision of training and information for teachers about the characteristics of ADHD and its basic behavioural management
- oversee the development and coordination of parent-training/education programmes
- consider compiling a comprehensive directory of information and services for ADHD including advice on how to contact relevant services and assist in the development of specialist teams. **[2008, amended 2018]**

1.1.4 A young person with ADHD receiving treatment and care from CAMHS or paediatric services should be reassessed at school-leaving age to establish the need for continuing treatment into adulthood. If treatment is necessary, arrangements should be made for a smooth transition to adult services with details of the anticipated treatment and services that the young person will require. Precise timing of arrangements may vary locally but should usually be completed by the time the young person is

18 years. See NICE's guideline on transition from children's to adults' services for young people using health or social care services. **[2008, amended 2018]**

1.1.5 During the transition to adult services, a formal meeting involving CAMHS and/or paediatrics and adult psychiatric services should be considered, and full information provided to the young person about adult services. For young people aged 16 years and older, the care programme approach (CPA) should be used as an aid to transfer between services. The young person, and when appropriate the parent or carer, should be involved in the planning. **[2008]**

1.1.6 After transition to adult services, adult healthcare professionals should carry out a comprehensive assessment of the person with ADHD that includes personal, educational, occupational and social functioning, and assessment of any coexisting conditions, especially drug misuse, personality disorders, emotional problems and learning difficulties. **[2008]**

Training

1.1.7 Trusts should ensure that specialist ADHD teams for children, young people and adults jointly develop age-appropriate training programmes for the diagnosis and management of ADHD for mental health, paediatric, social care, education, forensic and primary care providers and other professionals who have contact with people with ADHD. **[2008]**

1.1.8 Child and adult psychiatrists, paediatricians, and other child and adult mental health professionals (including those working in forensic services) should undertake training so that they are able to diagnose ADHD and provide treatment and management in accordance with this guideline. **[2008]**

1.1.9 The Department for Education should consider providing more education to trainee teachers about ADHD by working with the Teaching Agency and relevant health service organisations to produce training programmes and guidance for supporting children with ADHD. **[2008, amended 2018]**

1.2 Recognition, identification and referral

Recognition

1.2.1 Be aware that people in the following groups may have increased prevalence of ADHD compared with the general population:

- people born preterm (see NICE's guideline on developmental follow-up of children and young people born preterm)
- looked-after children and young people
- children and young people with oppositional defiant disorder or conduct disorder
- children and young people with mood disorders (for example, anxiety and depression)
- people with a close family member diagnosed with ADHD
- people with epilepsy
- people with neurodevelopmental disorders [for example, autism spectrum disorder, tic disorders, learning disability (intellectual disability) and specific learning difficulties]
- adults with a mental health condition (for example, psychosis)
- people with a history of substance misuse
- people within the secure estate
- people with acquired brain injury. **[2018]**

1.2.2 Be aware that ADHD is thought to be under-recognised in girls and women and that they are:

- less likely to be referred for assessment for ADHD
- more likely to have undiagnosed ADHD
- more likely to receive an incorrect diagnosis of another mental health or neurodevelopmental condition. **[2018]**

To find out why the committee made the 2018 recommendations on recognition and how they might affect practice, see rationale and impact

Identification and referral

1.2.3 Universal screening for ADHD should not be undertaken in nursery, primary and secondary schools. **[2008]**

1.2.4 When a child or young person with disordered conduct and suspected ADHD is referred to a school's special educational needs coordinator (SENCO), the SENCO, in addition to helping the child with their behaviour, should inform the parents about local parent-training/education programmes. See NICE's guideline on antisocial behaviour and conduct disorders in children and young people. **[2008, amended 2018]**

1.2.5 Referral from the community to secondary care may involve health, education and social care professionals (for example, GPs, paediatricians, educational psychologists, SENCOs, social workers) and care pathways can vary locally. The person making the referral to secondary care should inform the child or young person's GP. **[2008]**

1.2.6 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. **[2008]**

1.2.7 If the child or young person's behavioural and/or attention problems suggestive of ADHD are having an adverse impact on their development or family life, consider:

- a period of watchful waiting of up to 10 weeks
- offering parents or carers a referral to group-based ADHD-focused support (this should not wait for a formal diagnosis of ADHD).

If the behavioural and/or attention problems persist with at least moderate impairment, the child or young person should be referred to secondary care (that is, a child psychiatrist, paediatrician, or specialist ADHD CAMHS) for assessment. **[2008, amended 2018]**

1.2.8 If the child or young person's behavioural and/or attention problems are associated with severe impairment, referral should be made directly to secondary care (that is, a child psychiatrist, paediatrician, or specialist ADHD CAMHS) for assessment. **[2008]**

1.2.9 Primary care practitioners should not make the initial diagnosis or start medication in children or young people with suspected ADHD. **[2008]**

1.2.10 Adults presenting with symptoms of ADHD in primary care or general adult psychiatric services, who do not have a childhood diagnosis of ADHD, should be referred for assessment by a mental health specialist trained in the diagnosis and treatment of ADHD, where there is evidence of typical manifestations of ADHD (hyperactivity/impulsivity and/or inattention) that:

- began during childhood and have persisted throughout life
- are not explained by other psychiatric diagnoses (although there may be other coexisting psychiatric conditions)
- have resulted in or are associated with moderate or severe psychological, social and/or educational or occupational impairment. **[2008]**

1.2.11 Adults who have previously been treated for ADHD as children or young people and present with symptoms suggestive of continuing ADHD should be referred to general adult psychiatric services for assessment. The symptoms should be associated with at least moderate or severe psychological and/or social or educational or occupational impairment. **[2008]**

1.3 Diagnosis

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

- a full clinical and psychosocial assessment of the person; this should include discussion about behaviour and symptoms in the different domains and settings of the person's everyday life, and
- a full developmental and psychiatric history, and
- observer reports and assessment of the person's mental state. **[2008]**

1.3.2 A diagnosis of ADHD should not be made solely on the basis of rating scale or observational data. However rating scales such as the Conners' rating scales and the Strengths and Difficulties questionnaire are valuable adjuncts, and observations (for example, at school) are useful when there is doubt about symptoms. **[2008]**

1.3.3 For a diagnosis of ADHD, symptoms of hyperactivity/impulsivity and/or inattention should:

- meet the diagnostic criteria in DSM-5 or ICD-10 (hyperkinetic disorder)[1], and
- cause at least moderate psychological, social and/or educational or occupational impairment based on interview and/or direct observation in multiple settings, and
- be pervasive, occurring in two or more important settings including social, familial, educational and/or occupational settings.

As part of the diagnostic process, include an assessment of the person'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. **[2008, amended 2018]**

1.3.4 ADHD should be considered in all age groups, with symptom criteria adjusted for age-appropriate changes in behaviour. **[2008]**

[1] The ICD-10 exclusion on the basis of a pervasive developmental disorder being present, or the time of onset being uncertain, is not recommended.

1.3.5 In determining the clinical significance of impairment resulting from the symptoms of ADHD in children and young people, their views should be taken into account wherever possible. **[2008]**

1.4 Information and support

1.4.1 Use this guideline with the NICE guidelines on service user experience in adult mental health and patient experience in adult NHS services to improve the experience of care for adults with ADHD. The principles also apply to children and young people and their parents or carers. **[2018]**

1.4.2 Healthcare professionals working with children and young people with ADHD should follow the recommendations on general principles of care in NICE's guideline on antisocial behaviour and conduct disorder in children and young people. This does not mean that all children and young people with ADHD have coexisting antisocial behaviour and conduct disorder but that the same general principles of care apply when working with children and young people with ADHD. **[2018]**

1.4.3 Provide information and support for people who have an assessment but are not given a diagnosis of ADHD (for example, information about local and national groups and voluntary organisations that offer support for their situation). **[2018]**

Supporting people with ADHD

1.4.4 Following a diagnosis of ADHD, have a structured discussion with people (and their families or carers as appropriate) about how ADHD could affect their life. This could include:

- the positive impacts of receiving a diagnosis, such as:
  - improving their understanding of symptoms
  - identifying and building on individual strengths
  - improving access to services
- the negative impacts of receiving a diagnosis, such as stigma and labelling
- a greater tendency for impulsive behaviour

- the increased risk of substance misuse and self-medication
- the possible effect on driving (for example, some ADHD medication may impact on a person's fitness to drive and people with ADHD must declare their diagnosis to the DVLA if it affects their driving)
- the challenges of managing ADHD when a person has coexisting neurodevelopmental or mental health conditions
- education and employment issues (for example, impact on career choices and rights to reasonable adjustments at school and college, and in the workplace)
- social relationship issues.

This should inform the shared treatment plan. **[2018]**

1.4.5 Tell people receiving a diagnosis of ADHD (and their families or carers as appropriate) about:

- local and national support groups and voluntary organisations
- sources of more information, including websites
- support for education and employment. **[2018]**

1.4.6 Improve communication by providing information to people with ADHD (and their families and carers as appropriate) that:

- takes into account their developmental level, cognitive style, emotional maturity and cognitive capacity, including any learning disabilities, sight or hearing problems, delays in language development or social communication difficulties
- takes into account any coexisting neurodevelopmental and mental health conditions
- is tailored to their individual needs and circumstances, including age, gender, educational level and life stage. **[2018]**

Supporting families and carers

1.4.7 Ask families or carers of people with ADHD how the ADHD affects themselves and other family members, and discuss any concerns they have. **[2018]**

1.4.8 Encourage family members or carers of people with ADHD to seek an assessment of their personal, social and mental health needs, and to join self-help and support groups if appropriate. **[2018]**

1.4.9 Offer advice to parents and carers of children and young people with ADHD about the importance of :

- positive parent– and carer–child contact
- clear and appropriate rules about behaviour
- structure in the child or young person's day. **[2018]**

1.4.10 Offer advice to families and carers of adults with ADHD about:

- how ADHD may affect relationships
- how ADHD may affect the person's functioning
- the importance of structure in daily activities. **[2018]**

1.4.11 Explain to parents and carers that any recommendation of parent-training/education does not imply bad parenting, and that the aim is to optimise parenting skills to meet the above-average parenting needs of children and young people with ADHD. **[2018]**

Involving schools and colleges

1.4.12 When ADHD is diagnosed, when symptoms change, and when there is transition between schools or from school to college, obtain consent and then contact the school or college to explain:

- the validity of a diagnosis of ADHD and how symptoms are likely to affect school or college life
- other coexisting conditions (for example, learning disabilities) are distinct from ADHD and may need different adjustments
- the treatment plan and identified special educational needs, including advice for environmental and learning modifications
- the value of feedback from schools and colleges to people with ADHD and their healthcare professionals. **[2018]**

Involving other healthcare professionals

1.4.13 When a person with ADHD has a coexisting condition, contact the relevant healthcare professional, with consent, to explain:

- the validity, scope and implications of a diagnosis of ADHD
- how ADHD symptoms are likely to affect the person's behaviour (for example, organisation, time management) and adherence to specific treatments
- the treatment plan and the value of feedback from healthcare professionals. **[2018]**

To find out why the committee made the 2018 recommendations on information and support and how they might affect practice, see rationale and impact

1.5 Managing ADHD

Planning treatment

1.5.1 Healthcare providers should ensure continuity of care for people with ADHD. **[2018]**

1.5.2 Ensure that people with ADHD have a comprehensive, holistic shared treatment plan that addresses psychological, behavioural and occupational or educational needs. Take into account:

- the severity of ADHD symptoms and how these affect or may affect a person's life
- their goals
- the level of impairment and impact on their everyday life
- their resilience and protective factors
- the relative impact of other neurodevelopmental or mental health conditions. **[2018]**

1.5.3 Regularly discuss with people with ADHD, and their family members or carers, how they want to be involved in treatment planning and decisions;

such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once. **[2018]**

1.5.4 Before starting any treatment for ADHD, discuss the following with the person, and their family or carers as appropriate, encouraging children and young people to give their own account of how they feel:

- the benefits and harms of non-pharmacological and pharmacological treatments (for example, the efficacy of medications compared with no treatment or non-pharmacological treatments, potential side effects and non-response rates)
- the benefits of a healthy lifestyle, including exercise
- their preferences and concerns (for example, a person's decision to start, change or stop treatment may be influenced by media coverage, teachers, family members, friends and differing opinion on the validity of ADHD and specific treatments)
- how other mental health or neurodevelopmental conditions might affect treatment choices
- the importance of adherence to treatment and any factors that may affect this (for example, it may be difficult to take medication at school or work).

Record the person's preferences and concerns in their treatment plan. **[2018]**

1.5.5 Ask young people and adults with ADHD if a parent, partner, close friend or carer could join discussions on treatment and adherence. **[2018]**

1.5.6 Reassure people with ADHD, and their families or carers as appropriate, that they can revisit decisions about treatments. **[2018]**

To find out why the committee made the 2018 recommendations on managing ADHD – planning treatment and how they might affect practice, see rationale and impact.

Children under 5 years

1.5.7 Offer an ADHD-focused group parent-training programme to parents or carers of children under 5 years with ADHD as first-line treatment. See recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and young people[2]. **[2018]**

1.5.8 If after an ADHD-focused group parent-training programme, ADHD symptoms are still causing severe impairment across more than one domain in a child under 5 years, obtain specialist advice (ideally from a tertiary service).

To find out why the committee made the 2018 recommendations on managing ADHD – children under 5 years and how they might affect practice, see rationale and impact.

Children and young people aged 5 years[3] and over

1.5.9 Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. **[2018]**

1.5.10 Offer medication for children and young people with ADHD aged 5 years and over if their ADHD symptoms are having a persistent significant impact in at least one domain of their everyday life after environmental modifications. See the recommendations on medication choice. **[2018]**

[2] It should be noted that this does not imply that all children under 5 years with ADHD have antisocial behaviour or a conduct disorder but that the same general principles of care apply.
[2] At the time of consultation (September 2017), medicines used for the treatment of ADHD did not have a UK marketing authorisation for use in children aged 5 years and under for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

1.5.11 If a child or young person aged 5 years or over has ADHD and symptoms of oppositional defiant disorder or conduct disorder, offer parents and carers a parent-training programme in line with recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and young people as well as group-based ADHD-focused support. **[2018]**

1.5.12 Consider a course of cognitive behavioural therapy (CBT) for young people with ADHD who have benefited from medication but whose symptoms continue to have a significant impact on at least one domain of their everyday life, addressing the following areas:

- social skills with peers
- problem-solving
- self-control
- active listening skills
- dealing with and expressing feelings. **[2018]**

1.5.13 Consider individual parent-training/education programmes for parents and carers of children and young people with ADHD when:

- there are particular difficulties for families in attending group sessions [for example, because of disability, needs related to diversity such as language differences, learning disability (intellectual disability), parental ill-health, problems with transport, or where other factors suggest poor prospects for therapeutic engagement]
- a family's needs are too complex to be met by group-based parent-training/education programmes. **[2018]**

To find out why the committee made the 2018 recommendations on managing ADHD – children and young people aged 5 years and over, and how they might affect practice, see rationale and impact

Adults

1.5.14 Offer medication to adults with ADHD if their ADHD symptoms are having a significant impact on at least one domain of their everyday life after environmental modifications. See the recommendations on medication choice. **[2018]**

1.5.15 Consider non-pharmacological treatment for adults with ADHD who have:

- made an informed choice not to have medication
- difficulty adhering to medication
- found medication to be ineffective or cannot tolerate it. **[2018]**

1.5.16 Consider non-pharmacological treatment in combination with medication for adults with ADHD who have benefited from medication but whose symptoms continue to have a significant impact on at least one domain of their everyday life. **[2018]**

1.5.17 When non-pharmacological treatment is indicated for adults with ADHD, offer the following as a minimum:

- a structured supportive psychological intervention focused on ADHD
- regular follow-up either in person or by phone.

Treatment may involve elements of or a full course of CBT. **[2018]**

To find out why the committee made the 2018 recommendations on managing ADHD – adults and how they might affect practice, see rationale and impact

1.6 Dietary advice

1.6.1 Healthcare professionals should stress the value of a balanced diet, good nutrition and regular exercise for children, young people and adults with ADHD. **[2008]**

1.6.2 Do not advise elimination of artificial colouring and additives from the diet as a generally applicable treatment for children and young people with ADHD. **[2016]**

1.6.3 Ask about foods or drinks that appear to influence hyperactive behaviour as part of the clinical assessment of ADHD in children and young people, and:

- if there is a clear link, advise parents or carers to keep a diary of food and drinks taken and ADHD behaviour
- if the diary supports a relationship between specific foods and drinks and behaviour, offer referral to a dietitian
- ensure that further management (for example, specific dietary elimination) is jointly undertaken by the dietitian, mental health specialist or paediatrician, and the parent or carer and child or young person. **[2016]**

1.6.4 Do not advise or offer dietary fatty acid supplementation for treating ADHD in children and young people. **[2016]**

1.6.5 Advise the family members or carers of children with ADHD that there is no evidence about the long-term effectiveness or potential harms of a 'few food' diet for children with ADHD, and only limited evidence of short-term benefits. **[2016]**

1.7 Medication

1.7.1 Use this guideline with the NICE guideline on medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. **[2018]**

Baseline assessment

1.7.2 Before starting medication, people with ADHD should have a full assessment, which should include:

- a review to confirm they continue to meet the criteria for ADHD and need treatment

- 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 drug diversion
  - care needs
- a review of physical health, including:
  - a medical history, taking into account 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)
  - an ECG if the treatment may affect the QT interval (for example, tricyclics and monoamine oxidase inhibitors). **[2018]**

1.7.3 Refer for a cardiology 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, which could suggest a family history of cardiomyopathy or channelopathy
- 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
- blood pressure consistently above the 95th centile for age and height. **[2018]**

To find out why the committee made the 2018 recommendations on medication –

baseline assessment and how they might affect practice, see rationale and impact.

Medication choice – children aged 5 years and over and young people

Recommendations 1.7.4 to 1.7.7 update NICE's technology appraisal guidance on methylphenidate, atomoxetine and dexamfetamine for ADHD in children and adolescents (TA98).

1.7.4 Offer methylphenidate as first-line pharmacological treatment for children aged 5 years[4] and over and young people with ADHD. **[2018]**

1.7.5 Consider lisdexamfetamine for children aged 5 years[5] and over and young people whose ADHD symptoms are not responding adequately to methylphenidate. **[2018]**

1.7.6 Consider dexamfetamine[6] for children aged 5 years and over and young people whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile. **[2018]**

1.7.7 Offer atomoxetine or guanfacine to children aged 5 years[7] and over and young people if:

[4] At the time of consultation (September 2017), methylphenidate did not have a UK marketing authorisation for this indication in children aged 5 years or under. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[5] At the time of consultation (September 2017) lisdexamfetamine did not have a UK marketing authorisation for this indication in children aged 5 years or under. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[6] 'At the time of consultation (September 2017) dexamfetamine was only licensed for the treatment of ADHD in children and adolescents aged 6 to 17 years when response to previous methylphenidate treatment is considered clinically inadequate. Dexamfetamine is not licensed for the treatment of ADHD in children and adolescents aged 5 to 17 years who have responded to, but are intolerant to lisdexamfetamine. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[7] At the time of consultation (September 2017) atomoxetine or guanfacine did not have a UK marketing authorisation for this indication in children aged 5 years. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be

- they cannot tolerate methylphenidate or lisdexamfetamine, or
- their symptoms have not responded to separate 6-week trials of lisdexamfetamine and methylphenidate, having tried alternative formulations and adequate doses. **[2018]**

Medication choice – adults

1.7.8 Offer lisdexamfetamine[8] as first-line pharmacological treatment for adults with ADHD. **[2018]**

1.7.9 Consider methylphenidate[9] for adults whose ADHD symptoms are not responding adequately to lisdexamfetamine. **[2018]**

1.7.10 Consider dexamfetamine[10] for adults whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile. **[2018]**

1.7.11 Offer atomoxetine[11] to adults if:

- they cannot tolerate lisdexamfetamine or methylphenidate, or
- their symptoms have not responded to separate 6-week trials of lisdexamfetamine and methylphenidate, having considered alternative formulations and doses. **[2018]**

---

obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[8] At the time of consultation (September 2017) lisdexamfetamine was licensed for use in adults with symptoms of ADHD that pre-existed in childhood. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information

[9] At the time of consultation (September 2017) methylphenidate did not have a UK marketing authorisation for this indication in adults. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[10] At the time of consultation (September 2017) dexamfetamine did not have a UK marketing authorisation for this indication in adults. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[11] At the time of consultation (September 2017) atomoxetine was licensed for use in adults with symptoms of ADHD that pre-existed in childhood. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

To find out why the committee made the 2018 recommendations on medication – choice and how they might affect practice, see rationale and impact.

General prescribing information

1.7.12 Obtain a second opinion or refer to tertiary services if ADHD symptoms in a child aged 5 years or over, a young person or adult are unresponsive to one or more stimulants and one non-stimulant. **[2018]**

1.7.13 Do not offer any medication for ADHD other than in recommendations 1.7.4 to 1.7.11 outside a specialist (tertiary) ADHD service (for example, guanfacine[12] for adults, clonidine[13] for children with ADHD and sleep disturbance, rages or tics). **[2018]**

1.7.14 Offer the same medication choices to children aged 5 years and over, young people and adults with ADHD who have an anxiety disorder, tic disorder or autism spectrum disorder as other people with ADHD. **[2018]**

1.7.15 Do not offer immediate-release stimulants or modified-release stimulants that can be easily injected or insufflated if there is a risk of stimulant misuse or diversion. **[2018]**

1.7.16 Be cautious about prescribing stimulants for ADHD if there is a risk of stimulant diversion for cognitive enhancement or appetite suppression. **[2018]**

1.7.17 For children aged 5 years and over, young people and adults with ADHD experiencing an acute psychotic or manic episode:

[12] At the time of consultation (September 2017) guanfacine did not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information

[13] At the time of consultation (September 2017) clonidine did not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

- do not offer any new medication for ADHD and
- stop any previously prescribed medication for ADHD **[2018]**

1.7.18 Consider an atypical antipsychotic (for example, risperidone[14]) in addition to stimulants for children aged 5 years and over, young people and adults with ADHD and coexisting pervasive aggression, rages or irritability causing severe impairment and inadequately responsive to behavioural interventions. **[2018]**

Initiation and titration

1.7.19 Healthcare professionals initiating pharmacological treatment should be familiar with the pharmacokinetic profiles of all the modified-release and immediate-release preparations available for ADHD to ensure that treatment is tailored effectively to the individual needs of the child, young person or adult. Different preparations may vary in bioavailability or pharmacokinetic profiles and care needs to be taken to avoid reduced effect or excessive side effects. **[2018]**

1.7.20 Prescribers should be familiar with the requirements of controlled drug legislation governing the prescription and supply of stimulants. See NICE's guideline on controlled drugs. **[2018]**

1.7.21 Ensure that dose titration is slower and monitoring more frequent if any of the following are present in people with ADHD:

- neurodevelopmental disorders [for example, autism spectrum disorder, tic disorders, learning disability (intellectual disability)]
- mental health conditions [for example, anxiety disorders (including obsessive–compulsive disorder), schizophrenia or bipolar disorder, depression, personality disorder, eating disorder, post-traumatic stress disorder, substance misuse]

[14] At the time of consultation (September 2017) risperidone did not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information

- physical health conditions (for example, epilepsy or acquired brain injury). **[2018]**

1.7.22 During the titration phase, symptoms and side effects should be recorded at baseline and at each dose change on standard scales (for example, Conners' 10-item scale) by parents and teachers and progress reviewed regularly (for example, by weekly telephone contact) with a specialist. **[2018]**

1.7.23 Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. **[2018]**

1.7.24 After titration and dose stabilisation, prescribing and monitoring should be carried out under shared care arrangements with primary care. **[2018]**

1.7.25 When prescribing stimulants for ADHD, think about modified-release once-daily preparations for the following reasons:

- convenience
- improving adherence
- reducing stigma (because there is no need to take medication at school or in the workplace)
- reducing problems of storing and administering controlled drugs at school
- the risk of stimulant misuse and diversion with immediate-release preparations
- their pharmacokinetic profiles.

Immediate-release preparations may be suitable if more flexible dosing regimens are needed, or during initial titration to determine correct dosing levels. **[2018]**

1.7.26 Think about using immediate- and modified-release preparations of the same treatment to optimise effect (for example, a modified-release

preparation of methylphenidate in the morning and an immediate-release preparation of methylphenidate at another time of the day to extend the duration of effect). **[2018]**

1.7.27 Be aware that individuals respond to stimulants in different ways in terms of size of effects, duration of action and adverse effects. **[2018]**

To find out why the committee made the 2018 recommendations on medication – initiation and titration, and how they might affect practice, see rationale and impact.

1.8 Follow-up and monitoring

1.8.1 Monitor side effects resulting from medication for ADHD and document in the person's notes. **[2018]**

1.8.2 Consider using standard symptom and side effect rating scales for clinical assessment and throughout the course of treatment for people with ADHD. **[2018]**

1.8.3 Ensure that children, young people and adults receiving treatment for ADHD have review and follow-up according to the severity of their condition, regardless of whether or not they are taking medication. **[2018]**

Height and weight

1.8.4 For people taking medication for ADHD:

- measure height every 6 months in children and young people
- measure weight 3 and 6 months after starting treatment and every 6 months thereafter, or more often if concerns arise
- plot height and weight of children and young people on a growth chart and ensure review by the healthcare professional responsible for treatment. **[2018]**

1.8.5 Consider monitoring body mass index of adults with ADHD if there has been weight change as a result of their treatment, and changing the medication if weight change persists. **[2018]**

1.8.6 If weight loss is a clinical concern consider the following strategies:

- taking medication either with or after food, rather than before meals
- taking additional meals or snacks early in the morning or late in the evening when stimulant effects have worn off
- obtaining dietary advice
- consuming high-calorie foods of good nutritional value
- a planned break in treatment. **[2018]**

1.8.7 If a child or young person's height or weight over time is significantly affected by medication (that is, they have not met the height expected for their age), consider a planned break in treatment over school holidays to allow 'catch-up' growth. **[2018]**

Cardiovascular

1.8.8 Monitor heart rate and blood pressure and compare with the normal range for age before and after each dose change and every 6 months. **[2018]**

1.8.9 Do not offer routine blood tests (including liver function tests) or ECGs to people taking medication for ADHD unless there is a clinical indication. **[2018]**

1.8.10 If a person taking ADHD medication has sustained resting tachycardia (more than 120 beats per minute), arrhythmia or systolic blood pressure greater than the 95th percentile (or a clinically significant increase) measured on 2 occasions, reduce their dose and refer them to a paediatric cardiologist or adult physician. **[2018]**

1.8.11 If a person taking guanfacine has sustained orthostatic hypotension or fainting episodes, reduce their dose or switch to another ADHD medication. **[2018]**

Tics

1.8.12 If a person taking stimulants develops tics, think about whether:

- the tics are related to the stimulant (tics naturally wax and wane) and

- the impairment associated with the tics outweighs the benefits of ADHD treatment.

If tics are stimulant related, reduce the stimulant dose, or consider changing to guanfacine (in children aged 5 years and over and young people only), atomoxetine[15] or adding clonidine[16] or stopping medication. **[2018]**

Sexual dysfunction

1.8.13 Monitor young people and adults with ADHD for sexual dysfunction (that is, erectile and ejaculatory dysfunction) and dysmenorrhoea as potential side effects of atomoxetine. **[2018]**

Seizures

1.8.14 If a person with ADHD develops new seizures or a worsening of existing seizures, review their ADHD medication and stop any medication that might be contributing to the seizures. After investigation cautiously reintroduce ADHD medication if it is unlikely to be the cause of the seizures. **[2018]**

Sleep

1.8.15 Monitor changes in sleep pattern (for example, with a sleep diary) and adjust medication accordingly. **[2018]**

Worsening behaviour

1.8.16 Monitor the behavioural response to medication, and if behaviour worsens adjust medication and review the diagnosis. **[2018]**

---

[15] At the time of consultation (September 2017) atomoxetine was licensed for use in adults with symptoms of ADHD that pre-existed in childhood. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

[16] At the time of consultation (September 2017) clonidine did not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

Stimulant diversion

1.8.17 Healthcare professionals and parents or carers should monitor changes in the potential for stimulant misuse and diversion, which may come with changes in circumstances and age. **[2018]**

To find out why the committee made the 2018 recommendations on medication – monitoring side effects, and how they might affect practice, see rationale and impact.

1.9 Adherence to treatment

1.9.1 Use this guideline with the NICE guideline on medicines adherence to improve the care for adults with ADHD. The principles also apply to children and young people. **[2018]**

1.9.2 Be aware that the symptoms of ADHD may lead to people having difficulty adhering to treatment plans (for example, remembering to order and collect medication). **[2018]**

1.9.3 Ensure that people are fully informed of the balance of risks and benefits of any treatment for ADHD and check that problems with adherence are not due to misconceptions (for example, tell people that medication does not change personality). **[2018]**

1.9.4 Encourage the person with ADHD to use the following strategies to support adherence to treatment:

- being responsible for their own health, including taking their medication as needed
- following clear instructions about how to take the medication in picture or written format, which may include information on dose, duration, side effects, dosage schedule (the instructions should stay with the medication, for example, a sticker on the side of the packet)
- using visual reminders to take medication regularly (for example, apps, alarms, clocks, pill dispensers, or notes on calendars or fridges)

- taking medication as part of their daily routine (for example, before meals or after brushing teeth)
- attending peer support groups (for both the person with ADHD and for the families and carers). **[2018]**

1.9.5 Encourage parents and carers to oversee ADHD medication for children and young people. **[2018]**

Supporting families in which a parent has ADHD

1.9.6 Think about the needs of a parent with ADHD, including whether they need extra support with organisational strategies to help a child with ADHD to take their medication as prescribed. **[2018]**

Supporting adherence to non-pharmacological treatments

1.9.7 Support adherence to non-pharmacological treatments (for example, CBT) by discussing the following:

- the balance of risks and benefits (for example, how the treatment can have a positive effect on ADHD symptoms)
- the potential barriers to continuing treatment, including:
  - not being sure if it is making any difference
  - the time and organisational skills needed to commit to the treatment
  - the time that might be needed outside of the sessions (for example, to complete homework)
- strategies to deal with any identified barriers (for example, scheduling sessions to minimise inconvenience or seeking courses with child care provision)
- a possible effect of treatment being increased self-awareness and the challenging impact this may have on the person and the people around them
- the importance of long-term adherence beyond the duration of any initial programme (for example, by attending follow-up/refresher support to sustain learned strategies). **[2018]**

To find out why the committee made the 2018 recommendations on adherence to

treatment and how they might affect practice, see rationale and impact.

1.10 Review of medication and discontinuation

1.10.1 An ADHD specialist should review ADHD medication at least once a year and 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:

- preference of the child, young person or adult with ADHD (and their family or carers as appropriate)
- benefits, including how well the current treatment is working
- side effects
- clinical need and whether drug optimisation has been achieved
- impact on education and 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 and type of support required (for example, psychological, educational, social support) if medication has been optimised but ADHD symptoms continue to have a significant impact. **[2018]**

1.10.2 Encourage people with ADHD to discuss any preferences to stop or change medication and to be involved in any decisions about stopping treatments. **[2018]**

1.10.3 Consider trial periods of stopping medication or reducing the dose when assessment of the overall balance of benefits and harms suggests this may be appropriate. **[2018]**

To find out why the committee made the 2018 recommendations on review of medication and discontinuation, and how they might affect practice, see rationale and impact.

Terms used in this guideline

Environmental modifications

Changes that are made to the physical environment, for example, changes to seating arrangements at school, changes to lighting and to noise.

Recommendations for research

The guideline committee has made the following recommendations for research.

1 Children and young people aged 5 to 18 years – brief, group-based, ADHD-focused, parent-training intervention

What is the clinical and cost effectiveness, and optimum length of a brief parent-training intervention for parents and carers of children and young people with ADHD aged 5 to 18 years?

Why this is important

The evidence identified in this guideline was not clear about the benefit of formal parent-training programmes for children and young people aged 5 to 18 years. This guideline was unable to provide a robust assessment of the cost effectiveness of an intervention , partly because of uncertainty over the number of sessions/length of intervention needed to achieve the clinical benefits seen in trials. This research recommendation would help address these uncertainties.

2 Medication choice in people with coexisting conditions

What is the clinical and cost effectiveness of ADHD medications in people with ADHD and tic disorders, a history of psychosis or mania, or emotional dysregulation?

Why is this important

This guideline did not identify any evidence to justify different medication choices in the groups with ADHD and tic disorders, a history of psychosis or mania, or emotional dysregulation. These groups are often excluded from trials. There are reasons (for example, mechanism of action of medication options, previous reports of adverse events) to suspect that these groups may respond differently to different

drugs but a lack of trials to confirm this. Primarily there are some concerns that stimulant medication may worsen the symptoms of any of these coexisting conditions and therefore non-stimulant medication should be preferred.

3 Medication choice in people with no previous medication for ADHD

What is the clinical and cost effectiveness of ADHD medications in people with ADHD with no previous medication for the condition?

Why is this important

This guideline makes recommendations for the medication choices for people with ADHD, but most of the evidence to support these recommendations comes from studies in people who have previously received medication. Therefore, these studies often include a population not representative of the people with newly diagnosed ADHD. There may be differing levels of efficacy of the various treatment options in this population.

4 Prescribing beyond monotherapy

What is the clinical and cost effectiveness of various ADHD prescribing strategies when monotherapy has failed?

Why is this important

This guideline makes recommendations for the medication choices for people with ADHD up to the point at which common monotherapies are exhausted. There is very little evidence to guide healthcare professionals beyond this point, particularly with regards to whether there is a benefit of prescribing stimulant and non-stimulant medication together.

5 Children under 5 years – brief, group-based, ADHD-focused, parent-training intervention

What is the clinical and cost effectiveness of pharmacological versus non-pharmacological treatment versus a combination in children under 5 years with ADHD?

Why is this important

Many children are diagnosed with ADHD under the age of 5 years. There is much hesitancy around the use of ADHD medication in this age group, although there has been little research into the option. There is more evidence in this age group supporting the efficacy of non-pharmacological interventions (for example parent-training programmes), but there is no evidence directly comparing the efficacy of this with pharmacological treatment or a combination of the two.

Rationale and impact

Recognition

The committee's full discussion is in evidence review A: risk factors.

Why the committee made the 2018 recommendations

Evidence showed that the prevalence of ADHD is higher in some groups than in the general population. The committee agreed that a recommendation was needed to raise awareness of these groups among non-specialists to help them avoid missing a diagnosis of ADHD. Although no evidence was identified for a higher prevalence in people within the secure estate and people with acquired brain injury, the committee agreed that in their experience these groups often receive a late diagnosis of ADHD or a misdiagnosis. No evidence was found on the increased risk of missing a diagnosis of ADHD in girls. But the committee discussed the different symptoms often found in this group, and agreed to make a recommendation to raise awareness.

How the 2018 recommendations might affect practice

The recommendations are to raise awareness among non-specialists of a possible diagnosis of ADHD in groups of people that they are already seeing. The recommendations may increase the rates of diagnosis and referral for ADHD, but these should be accurate and therefore appropriate diagnoses and management.

Information and support

The committee's full discussion is in evidence review B: information and support.

Why the committee made the 2018 recommendations

Good information and support tailored to need and circumstances are important for all people using NHS services, but some aspects are particularly important for people with ADHD. Evidence identified the need for information tailored to family circumstances, particularly when a child has ADHD, and to highlight the importance of daily structure for adults with ADHD.

Evidence showed the importance of discussing key areas following a diagnosis of ADHD, particularly the positive impacts of receiving a diagnosis, such as improving understanding of symptoms. The committee used the evidence and their experience to agree other areas for discussion, including driving and possible issues with education and employment. They noted that schools and colleges may sometimes question a diagnosis of ADHD and not understand how symptoms can affect daily functioning. In addition, healthcare professionals treating a coexisting condition may not be aware of how ADHD symptoms may affect behaviour (organisation and time management) and adherence to treatment.

There was evidence that parents of children with ADHD often feel a sense of isolation when attending parent-training programmes. The committee agreed that healthcare professionals should explain to parents that an invitation to attend a parent-training programme does not imply bad parenting.

In the committee's experience, people who are assessed for ADHD but not given a formal diagnosis are a neglected group who would benefit from advice on where to get support for troublesome symptoms.

How the 2018 recommendations might affect practice

The recommendations should reflect good current practice. Healthcare professionals may spend more time discussing the potential impacts of a diagnosis, but this is likely to mean improved quality of life for the person with ADHD and better management of their symptoms.

Managing ADHD – planning treatment

The committee's full discussion is in evidence review H: managing treatment.

Why the committee made the 2018 recommendations

Evidence showed the importance of joint decision-making when planning treatment; particularly important was the discussion before starting treatment. This was also the committee's experience and they recommended that these discussions should be repeated throughout care.

The committee recommended key areas highlighted in the evidence that should be discussed with the person and their family before starting treatment. This included the benefits and harms of medications and consideration of these alongside other treatment choices.

In the committee's experience, other mental health and neurodevelopmental conditions may affect treatment choices and how successful these are. The committee emphasised the importance of a holistic approach to managing ADHD.

Evidence indicated that parents and carers of children with ADHD found it hard to make decisions about treatment and wanted time to think about the effect of any environmental modifications. The committee recognised the importance of having the opportunity to regularly revisit and discuss earlier decisions and so recommended that healthcare professionals remind people that they can do this if they wish.

The committee acknowledged that it is important to include children and young people in any treatment discussions and recommended they should be encouraged to say how they feel. This should include their views on the aims and effect of any treatments. Healthcare professionals should be aware that these will change as the child matures and will need revisiting. The committee also recognised that it was important that young people and adults should have as much support as they need and should be asked if they would like someone to join discussions about treatment. Decisions around treatment can have many influences, including teachers, peers and the media.

Evidence identified concerns around lack of follow-up and the opportunity to review medication choices and this was supported by the committee's experience. They agreed that a yearly review with an ADHD specialist should be a comprehensive

assessment that revisits the areas discussed when starting treatment but also the effect of current treatment. This would ensure that decisions around continuing or stopping treatment are fully informed.

How the 2018 recommendations might affect practice

The recommendations should reflect good current practice. Where practice might change, it is predominantly the approach to care that will be affected.

Managing ADHD – children under 5 years

The committee's full discussion is in evidence review E: non-pharmacological efficacy and adverse events and evidence review F: combination treatment.

Why the committee made the 2018 recommendations

Evidence showed a clinically important benefit of an ADHD-focused group parent-training programme for children under 5 years. There was limited evidence on the efficacy of medication and because of concerns about medication in very young children the committee agreed to recommend a group-based parent-training programme as first-line treatment. However, the committee acknowledged that some children may still have severe impairment after the programme. For these children, the committee drew on their experience to recommend that healthcare professionals should seek specialist advice, ideally from a tertiary service.

How the 2018 recommendations might affect practice

The recommendations reflect good current practice.

Managing ADHD – children and young people aged 5 years and over

The committee's full discussion is in evidence review E: non-pharmacological efficacy and adverse events and evidence review F: combination treatment.

Why the committee made the 2018 recommendations

Evidence indicated that all parents and carers of children and young people aged 5 years and over would benefit from group support. After discussion of current good practice and consideration of the balance of benefits and costs, the committee decided to recommend limited group-based ADHD-focused support (may be as few

as 1 or 2 sessions) for parents and carers of all children and young people with ADHD.

Evidence showed the benefit of medication in this age group and this was in line with the committee's experience. Medication offered a good balance of benefits and costs so the committee agreed to recommend it when ADHD symptoms are having a significant impact on at least one domain of everyday life despite environmental modifications.

Combining a full parent-training programme with medication did not offer a good balance of benefits and costs for all children and young people in this age group so the committee decided to not to make a recommendation on this.

Some evidence showed a benefit of cognitive-behavioural therapy (CBT) in young people with ADHD. The committee agreed that this should be considered when a young person has benefited from medication but still have symptoms that are having a significant impact on their lives. They used their experience to recommend areas that a programme should address.

How the 2018 recommendations might affect practice

Children aged 5 years and over and young people are only offered medication if symptoms are having a significant impact in at least one domain of their everyday life despite environmental modifications. This may be a slightly different group from those with severe ADHD who were offered medication in the 2008 recommendation. But there is considerable overlap, and the 2018 recommendation is unlikely to result in a substantial increase in prescribing and resource use.

Managing ADHD – adults

The committee's full discussion is in evidence review E: non-pharmacological efficacy and adverse events and evidence review F: combination treatment.

Why the committee made the 2018 recommendations

Evidence directly comparing medication with non-pharmacological treatment supported the use of medication for first-line treatment of ADHD in adults. This was in line with the committee's experience so they agreed to recommend medication

when ADHD symptoms are having a significant impact on at least one domain of everyday life despite environmental modifications.

Evidence indicated a benefit of non-pharmacological treatment, although this was less than for medication. There was also evidence of the importance of offering a choice of treatments so the committee agreed that non-pharmacological treatment should be considered for adults who have made an informed choice not to have medication, have difficulty adhering to medication or have found medication ineffective or intolerable. Based on their experience, the committee recommended that the treatment may include elements or a full programme of CBT and should include a structured supportive psychological intervention focused on ADHD, with regular follow-up and information.

Combining medication with non-pharmacological treatment did not offer the best balance of benefits and costs so the committee decided that combination treatment should only be considered when medication has offered some benefit but symptoms continue to have a significant effect on everyday life.

How the 2018 recommendations might affect practice

The recommendations reflect good current practice.

Medication – baseline assessment

The committee's full discussion is in evidence review D: pharmacological safety.

Why the committee made the 2018 recommendations

The committee noted that it is important to carry out a baseline assessment before starting ADHD medication. Evidence was limited on what should be assessed clinically, but the committee used their experience and expert advice to recommend a general review of health and social circumstances, and a review of physical health, including an ECG, depending on the proposed treatment. The committee used their experience to outline criteria for referral for a cardiologist opinion.

How the 2018 recommendations might affect practice

The recommendations reflect good current practice.

Medication – choice

The committee's full discussion is in evidence review C: pharmacological efficacy and sequencing.

Why the committee made the 2018 recommendations

Evidence showed a clinically important benefit for monotherapy with the stimulants methylphenidate and lisdexamfetamine compared with placebo or other drugs. This was supported by the committee's experience that stimulants work quicker than non-stimulant drugs (for example, atomoxetine and guanfacine), which can take up to 2 weeks to have an effect. The committee used the evidence, their experience and the drug licensing to recommend methylphenidate as a first treatment for children aged 5 years and over and young people, and lisdexamfetamine as a first treatment for adults.

The committee acknowledged the rising cost of dexamfetamine and agreed that it should only be considered when lisdexamfetamine is effective but the longer effect profile is not well tolerated.

The committee agreed that if an initial stimulant has not been effective then another should be considered. This would be lisdexamfetamine for children aged 5 years and over and young people, and methylphenidate for adults. The committee acknowledged that these recommendations were outside the licensing indications, but based their decision on the evidence and their clinical experience that stimulants are more effective than non-stimulants.

Atomoxetine and guanfacine were the non-stimulant drugs with the most convincing evidence. The committee noted that atomoxetine is more widely used and that there was stronger evidence for a benefit of atomoxetine compared with placebo than guanfacine compared with placebo. One trial directly comparing atomoxetine with guanfacine generally showed a clinically important benefit of guanfacine. Taking into account the licensing status of these drugs and the familiarity of most healthcare professionals with them, the committee recommended that in children aged 5 years and over and young people either drug could be offered after intolerance or a lack of response to stimulants (methylphenidate and lisdexamfetamine). As guanfacine is not licensed for use in adults and there was no evidence specifically supporting its

use in this population, the committee recommended atomoxetine for adults with intolerance or a lack of response to stimulants.

There was not enough evidence to justify specific recommendations for other drugs so the committee recommended that after at least one stimulant and non-stimulant had been tried, healthcare professionals should obtain a second opinion or refer to a tertiary service.

Medication choice for people with coexisting conditions

There was very little evidence on medication choice for people with ADHD and coexisting conditions and so the committee made research recommendations to address this gap. The committee agreed that neither the available evidence nor their experience justified a different choice of ADHD medication for people with ADHD and coexisting conditions, but there should be slower titration, more careful monitoring and recording of side effects, and regular weekly contact. However, the committee recommended that ADHD medication should be stopped in people experiencing a psychotic episode because they agreed that ADHD medication could worsen psychotic symptoms.

How the 2018 recommendations might affect practice

The recommendations reflect good current practice.

Medication – initiation and titration

The committee's full discussion is in evidence review D: pharmacological safety.

Why the committee made the 2018 recommendations

The committee discussed that the careful initiation of ADHD medication is key to a successful treatment plan. This includes starting and titrating medication according to the BNF and the person's tolerance until the dose is optimised (reduced symptoms, positive behaviour change, improvements in education, employment and relationships and tolerable side effects). The committee agreed that healthcare professionals should be aware of the pharmacokinetic profiles of ADHD medication because preparations can vary in their profiles. This is important when considering which medication or formulation to prescribe.

How the 2018 recommendations might affect practice

The recommendations reflect good current practice.

Medication – monitoring side effects

The committee's full discussion is in evidence review D: pharmacological safety.

Why the committee made the 2018 recommendations

Evidence showed clinically important differences in sleep disturbance, decreased appetite and weight changes in people taking ADHD medication. In the committee's experience these are some of the most troublesome side effects. Because of concerns about decreased appetite and weight change, the committee advised that weight should be checked at least every 6 months in children and young people and body mass index should be monitored in adults. The committee recommended that changes in sleep pattern should be recorded and medication adjusted accordingly.

There was some evidence that people on atomoxetine may experience sexual dysfunction, in particular erectile dysfunction, and the committee agreed that this should be monitored.

How the 2018 recommendations might affect practice

The committee noted that the recommendations will reinforce current best practice.

Adherence to treatment

The committee's full discussion is in evidence review G: adherence.

Why the committee made the 2018 recommendations

The evidence identified several factors that affect adherence to treatment and these were supported by the committee's own experience.

The evidence highlighted time management and forgetfulness as particular issues so the committee made a recommendation that healthcare professionals should be aware that people with ADHD may have problems remembering to order and collect medication. The committee provided examples of how healthcare professionals might encourage people to follow strategies that support adherence (for example, following clear instructions and using visual reminders).

A common worry about treatment is that it might change personality and the committee agreed that this could affect adherence to both medication and non-pharmacological treatments. Misconceptions about the effects of treatment and worries about side effects were common themes identified, and the committee agreed that it was important that healthcare professionals address these.

Evidence identified the influence people close to a person with ADHD can have on adherence. The committee agreed that it was important that while children and young people should take responsibility for their own health (including taking medication) parents and carers should oversee them. The committee discussed the difficulties in families where parents may also have ADHD and made a recommendation to remind healthcare professionals that these families may need extra support.

The committee discussed that adherence to non-pharmacological treatment was an important issue that was rarely addressed. They used their own experience to recommend that healthcare professionals discuss the commitment, time and organisational skills needed for successful adherence to non-pharmacological treatment.

How the 2018 recommendations might affect practice

The committee noted that the recommendations will reinforce current best practice.

Review of medication and discontinuation

The committee's full discussion is in evidence review I: withdrawal and drug holidays.

Why the committee made the 2018 recommendations

Limited evidence showed possible worsening of ADHD symptoms on stopping medication but supported a reduction in side effects after withdrawal. The committee used their experience to make a recommendation on emphasising the importance of assessing the overall benefits and harms of medication as part of a review. The committee agreed that it was important to highlight the elements of a medication review that are important for someone with ADHD; they based the elements on evidence on adverse effects of medication, management of treatment, adherence and information and support.

How the 2018 recommendations might affect practice

The committee noted that the recommendations will reinforce current best practice.

Putting this guideline into practice

[This section will be completed after consultation]

NICE has produced tools and resources to help you put this guideline into practice.

Putting recommendations into practice can take time. How long may vary from guideline to guideline, and depends on how much change in practice or services is needed. Implementing change is most effective when aligned with local priorities.

Changes recommended for clinical practice that can be done quickly – like changes in prescribing practice – should be shared quickly. This is because healthcare professionals should use guidelines to guide their work – as is required by professional regulating bodies such as the General Medical and Nursing and Midwifery Councils.

Changes should be implemented as soon as possible, unless there is a good reason for not doing so (for example, if it would be better value for money if a package of recommendations were all implemented at once).

Different organisations may need different approaches to implementation, depending on their size and function. Sometimes individual practitioners may be able to respond to recommendations to improve their practice more quickly than large organisations.

Here are some pointers to help organisations put NICE guidelines into practice:

1. **Raise awareness** through routine communication channels, such as email or newsletters, regular meetings, internal staff briefings and other communications with all relevant partner organisations. Identify things staff can include in their own practice straight away.

2. **Identify a lead** with an interest in the topic to champion the guideline and motivate others to support its use and make service changes, and to find out any significant issues locally.

3. **Carry out a baseline assessment** against the recommendations to find out whether there are gaps in current service provision.

4. **Think about what data you need to measure improvement** and plan how you will collect it. You may want to work with other health and social care organisations and specialist groups to compare current practice with the recommendations. This may also help identify local issues that will slow or prevent implementation.

5. **Develop an action plan**, with the steps needed to put the guideline into practice, and make sure it is ready as soon as possible. Big, complex changes may take longer to implement, but some may be quick and easy to do. An action plan will help in both cases.

6. **For very big changes** include milestones and a business case, which will set out additional costs, savings and possible areas for disinvestment. A small project group could develop the action plan. The group might include the guideline champion, a senior organisational sponsor, staff involved in the associated services, finance and information professionals.

7. **Implement the action plan** with oversight from the lead and the project group. Big projects may also need project management support.

8. **Review and monitor** how well the guideline is being implemented through the project group. Share progress with those involved in making improvements, as well as relevant boards and local partners.

NICE provides a comprehensive programme of support and resources to maximise uptake and use of evidence and guidance. See our into practice pages for more information.

Also see Leng G, Moore V, Abraham S, editors (2014) Achieving high quality care – practical experience from NICE. Chichester: Wiley.

Context

Attention deficit hyperactivity disorder (ADHD) is a heterogeneous disorder characterised by the core symptoms of hyperactivity, impulsivity and inattention,

which are judged excessive for the person's age or level of overall development. The diagnosis is made on the basis of observed and reported behavioural symptoms. Two main diagnostic systems are in current use, the International Classification of Mental and Behavioural Disorders 10th revision (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5). Both systems require that symptoms are present in several settings such as school/work, home life and leisure activities. Symptoms should be evident in early life, if only in retrospect; for ICD-10, by age 7 years and for DSM-5 by age 12 years. ADHD may persist into adult life.

Prevalence rates for ICD-10 (identifying hyperkinetic disorder) are 1 to 2% in childhood. Under the previous, less stringent DSM-IV criteria, childhood prevalence rates were 3 to 9% and these may increase under the new DSM-5 criteria.

The causes of ADHD are not fully understood but a number of risk factors are associated with the condition. Genetic factors can have an influence with family members frequently affected. The diagnosis of ADHD in older family members such as parents may have previously been missed and should be considered.

Both the ICD-10 and DSM-5 require the presence of functional impairment due to symptoms of ADHD, with the symptoms adversely affecting psychological, social and/or educational/occupational functioning. ADHD may vary considerably in its severity, which is best judged by considering the level of impairment, pervasiveness, and familial and social context. For some people, symptoms and impairment maybe reduced through environmental modifications, such as a modified school curriculum or choice of employment. ADHD is considered mild when symptoms are limited to certain settings and causing mild impairment in a limited number of domains (competencies such as completing schoolwork, work tasks, avoiding common hazards and forming positive interpersonal relationships). Moderate ADHD is present when the symptoms occur in multiple settings and are associated with at least moderate impairment in multiple domains. Severe ADHD is defined when multiple symptom areas (hyperactivity, inattention and impulsivity) are all present in multiple settings, and when impairment is severe.

Symptoms of ADHD can overlap with those of other related disorders. Therefore, care in differential diagnosis is needed. ADHD may also coexist with other disorders. Common coexisting conditions in children include disorders of mood, conduct, learning, motor control, language and communication, and anxiety disorders; in adults they include personality disorders, bipolar disorder, obsessive-compulsive disorder and substance misuse. Where there are coexisting conditions, it is important to try to differentiate the level of impairment due to ADHD, as this will guide the treatment plan. In addition ADHD is under-recognised in some populations, which can mean that a lack of appropriate diagnosis and treatment adversely affects people's quality of life.

The aim of this guideline is to raise awareness of populations at risk and to provide clear advice on managing ADHD.

The guideline covers children under 5 years, children and young people aged 5 to 17 years, and adults aged 18 years or over who are at risk of ADHD or have a diagnosis of ADHD. The guideline covers all primary, secondary and community care settings in which NHS-funded care is provided for people with ADHD.

More information

To find out what NICE has said on topics related to this guideline, see our web page on mental health and behavioural conditions.

Update information

February 2018

This guideline is an update of NICE guideline CG72 (published September 2008) and will replace it.

New recommendations have been added on recognition, information and support, managing ADHD (including non-pharmacological treatment), medication, follow-up and monitoring, adherence, and review of medication and discontinuation.

These are marked as: **[2018]**

NICE proposes to delete some recommendations from the 2008 guideline, because either the evidence has been reviewed and the recommendations have been updated, or NICE has updated other relevant guidance and has replaced the original recommendations. Recommendations that have been deleted or changed sets out these recommendations and includes details of replacement recommendations. Where there is no replacement recommendation, an explanation for the proposed deletion is given.

Where recommendations are shaded in grey and end **[2008]**, the evidence has not been reviewed since the original guideline.

Where recommendations are shaded in grey and end **[2008, amended 2018]**, the evidence has not been reviewed but changes have been made to the recommendation wording that change the meaning (for example, because of equalities duties or a change in the availability of medicines, or incorporated guidance has been updated). These changes are marked with yellow shading, and explanations of the reasons for the changes are given in 'Recommendations that have been deleted or changed' for information.

See also the original NICE guideline and supporting documents.

Recommendations that have been deleted or changed

Recommendations to be deleted

Recommendation in 2008 guideline	Comment
Healthcare professionals should develop a trusting relationship with people with ADHD and their families or carers by: • respecting the person and their family's knowledge and experience of ADHD • being sensitive to stigma in relation to mental illness. (1.1.2.1)	Replaced by: Healthcare professionals working with children and young people with ADHD should follow the recommendations on general principles of care in NICE's guideline on antisocial behaviour and conduct disorder in children and young people. This does not mean that all children and young people with ADHD have coexisting antisocial behaviour and conduct disorder but that the same general principles of care apply when working with children and young people. [2018] (1.4.2)
Healthcare professionals should provide people with ADHD and their families	Replaced by:

or carers with relevant, age-appropriate information (including written information) about ADHD at every stage of their care. The information should cover diagnosis and assessment, support and self-help, psychological treatment, and the use and possible side effects of drug treatment. (1.1.2.2)	Use this guideline with the NICE guidelines on service user experience in adult mental health and patient experience in adult NHS services to improve the experience of care for adults with ADHD. The principles also apply to children and young people and their parents or carers. [2018] (1.4.1) Healthcare professionals working with children and young people with ADHD should follow the recommendations on general principles of care in NICE's guideline on antisocial behaviour and conduct disorder in children and young people. This does not mean that all children and young people with ADHD have coexisting antisocial behaviour and conduct disorder but that the same general principles of care apply when working with children and young people. [2018] (1.4.2) Following a diagnosis of ADHD, have a structured discussion with people (and their families or carers as appropriate) about how ADHD could affect their life. This could include: • the positive impacts of receiving a diagnosis, such as: • improving their understanding of symptoms • identifying and building on individual strengths • improving access to services • the negative impacts of receiving a diagnosis, such as stigma and labelling • a greater tendency for impulsive behaviour • the increased risk of substance misuse and self-medication • the possible effect on driving (for example, some ADHD medication may impact on a person's fitness to drive and people with ADHD must declare their diagnosis to the DVLA if it affects their driving) • the challenges of managing ADHD when a person has coexisting neurodevelopmental or mental health conditions • education and employment issues (for example, impact on career

	choices and rights to reasonable adjustments at school and college, and in the workplace) • social relationship issues. This should inform the shared treatment plan. [2018] (1.4.4) Improve communication by providing information to people with ADHD (and their families and carers as appropriate) that: • takes into account their developmental level, cognitive style, emotional maturity and cognitive capacity, including any learning disabilities, sight or hearing problems, delays in language development or social communication difficulties • takes into account any coexisting neurodevelopmental and mental health conditions • is tailored to their individual needs and circumstances, including age, gender, educational level and life stage. [2018] (1.4.6)

When assessing a child or young person with ADHD, and throughout their care, healthcare professionals should: • allow the child or young person to give their own account of how they feel, and record this in the notes • involve the child or young person and the family or carer in treatment decisions • take into account expectations of treatment, so that informed consent can be obtained from the child's parent or carer or the young person before treatment is started. (1.1.2.3)	These principles have been included in the following recommendations: Regularly discuss with people with ADHD, and their family members or carers, how they want to be involved in treatment planning and decisions; such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once. [2018] (1.5.3) Before starting any treatment for ADHD, discuss with the person, and their family or carers as appropriate, , encouraging children and young people to give their own account of how they feel: • the benefits and harms of non-pharmacological and pharmacological treatments (for example, the efficacy of medications compared with no treatment or non-pharmacological treatments, potential side effects and non-response rates) • the benefits of a healthy lifestyle, including exercise • their preferences and concerns (for example, a person's decision to start, change or stop treatment may be influenced by media coverage, teachers, family members, friends and differing opinion on the validity of ADHD and specific treatments) • how other mental health or neurodevelopmental conditions might affect treatment choices • the importance of adherence to treatment and any factors that may affect this (for example, it may be difficult to take medication at school or work). Record the person's preferences and concerns in their treatment plan. [2018] (1.5.4)
Healthcare professionals working with children and young people with ADHD should be: • familiar with local and national guidelines on confidentiality and the rights of the child	Replaced by: Healthcare professionals working with children and young people with ADHD should follow the recommendations on general principles of care in NICE's

• able to assess the young person's understanding of issues related to ADHD and its treatment (including Gillick competence) • familiar with parental consent and responsibilities, child protection issues, the Mental Health Act (2007) and the Children Act (1989). (1.1.2.4)	guideline on antisocial behaviour and conduct disorder in children and young people. This does not mean that all children and young people with ADHD have coexisting antisocial behaviour and conduct disorder but that the same general principles of care apply when working with children and young people. [2018] (1.4.2)
Healthcare professionals should work with children and young people with ADHD and their parents or carers to anticipate major life changes (such as puberty, starting or changing schools, the birth of a sibling) and make appropriate arrangements for adequate personal and social support during times of increased need. The need for psychological treatment at these times should be considered. (1.1.2.5)	Replaced by: Regularly discuss with people with ADHD, and their family members or carers, how they want to be involved in treatment planning and decisions; such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once. [2018] (1.5.3)
Adults with ADHD should be given written information about local and national support groups and voluntary organisations. (1.1.2.6)	Replaced by: Tell people receiving a diagnosis of ADHD (and their families or carers as appropriate) about: • local and national support groups and voluntary organisations • sources of more information, including websites • support for education and employment. [2018] (1.4.5)
Healthcare professionals should ask families or carers about the impact of ADHD on themselves and other family members, and discuss any concerns they may have. Healthcare professionals should: • offer family members or carers an assessment of their personal, social and mental health needs • encourage participation in self-help and support groups where appropriate • offer general advice to parents and carers about positive parent–and carer–child • contact, clear and appropriate rules about behaviour, and the importance of structure in the child or young person's day • explain that parent-	Replaced by: Ask families or carers of people with ADHD how the ADHD affects themselves and other family members, and discuss any concerns they have. [2018] (1.4.7) Encourage family members or carers of people with ADHD to seek an assessment of their personal, social and mental health needs, and to join self-help and support groups if appropriate. [2018] (1.4.8) Offer advice to parents and carers of children and young people with ADHD about the importance of: • positive parent– and carer–child contact • clear and appropriate rules about behaviour

training/education programmes do not necessarily imply bad parenting, and that their aim is to optimise parenting skills to meet the above-average parenting needs of children and young people with ADHD. (1.1.2.7)	• structure in the child or young person's day. [2018] (1.4.9) Offer advice to families and carers of adults with ADHD about: • how ADHD may affect relationships • how ADHD may affect the person's functioning • the importance of structure in daily activities. [2018] (1.4.10) Explain to parents and carers that any recommendation of parent-training/education does not imply bad parenting, and that the aim is to optimise parenting skills to meet the above-average parenting needs of children and young people with ADHD. [2018] (1.4.11)
A child or young person who is currently treated in primary care with methylphenidate, atomoxetine, dexamfetamine, or any other psychotropic drug for a presumptive diagnosis of ADHD, but has not yet been assessed by a specialist in ADHD in secondary care, should be referred for assessment to a child psychiatrist, paediatrician, or specialist ADHD CAMHS as a matter of clinical priority. (1.2.1.9)	This recommendation has been deleted because the committee agreed that a child or young person should only have diagnosis and treatment confirmed by a specialist in ADHD. This recommendation is at odds with recommendation 1.2.1.8 in the 2008 guideline.
Following a diagnosis of ADHD, healthcare professionals should consider providing all parents or carers of all children and young people with ADHD self-instruction manuals, and other materials such as videos, based on positive parenting and behavioural techniques. (1.4.1.1)	This recommendation has been replaced with a larger section on information and support: Tell people receiving a diagnosis of ADHD (and their families or carers as appropriate) about: • local and national support groups and voluntary organisations • sources of more information, including websites • support for education and employment. [2018] (1.4.5) Improve communication by providing information to people with ADHD (and their families and carers as appropriate) that: • takes into account their

	developmental level, cognitive style, emotional maturity and cognitive capacity, including any learning disabilities, sight or hearing problems, delays in language development or social communication difficulties • takes into account any coexisting neurodevelopmental and mental health conditions • is tailored to their individual needs and circumstances, including age, gender, educational level and life stage. [2018](1.4.6) Offer advice to parents and carers of children and young people with ADHD about the importance of: • positive parent– and carer–child contact • clear and appropriate rules about behaviour • structure in the child or young person's day. [2018] (1.4.9)
Drug treatment is not recommended for pre-school children with ADHD. (1.5.1.1)	Replaced by: Offer an ADHD-focused group parent-training programme to parents or carers of children under 5 years with ADHD as first-line treatment. See the recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and young people. [2018] (1.5.7) If after an ADHD-focused group parent-training programme, ADHD symptoms are still causing severe impairment across more than one domain in a child under 5 years, obtain specialist advice (ideally from a tertiary service). [2018] (1.5.8)
Following a diagnosis of ADHD in a child of pre-school age, healthcare professionals should, with the parents' or carers' consent, contact the child's nursery or pre-school teacher to explain: • the diagnosis and severity of symptoms and impairment • the care plan • any special educational needs.	Replaced by: When ADHD is diagnosed, when symptoms change, and when there is transition between schools or from school to college, obtain consent and then contact the school or college to explain: • the validity of a diagnosis of ADHD and how symptoms are likely to affect school or college

(1.5.1.2)	life • other coexisting conditions (for example, learning disabilities) are distinct from ADHD and may need different adjustments • the treatment plan and identified special educational needs, including advice for environmental and learning modifications • the value of feedback from schools and colleges to people with ADHD and their healthcare professionals. (1.4.12)
Healthcare professionals should offer parents or carers of pre-school children with ADHD a referral to a parent-training/education programme as the first-line treatment if the parents or carers have not already attended such a programme or the programme has had a limited effect. (1.5.1.3)	Replaced by: Offer an ADHD-focused parent-training programme to parents or carers of children under 5 years with ADHD as first-line treatment. See recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and young people. (1.5.7)
Group-based parent-training/education programmes, developed for the treatment and management of children with conduct disorders, should be fully accessible to parents or carers of children with ADHD whether or not the child also has a formal diagnosis of conduct disorder. (1.5.1.4)	Replaced by: Offer parents and carers of all children and young people aged 5 years and over with ADHD group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. (1.5.9) If a child or young person aged 5 years or over has ADHD and symptoms of oppositional defiant disorder or conduct disorder, offer parents and carers a parent-training programme in line with recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and young people as well as group-based ADHD-focused support. [2018] (1.5.11)
Individual-based parent-training/education programmes are recommended in the management of children with ADHD when: • a group programme is not possible because of low participant numbers	Replaced by: Consider individual parent-training/education programmes for parents and carers of children and young people with ADHD when: • there are particular difficulties for families in attending group

• there are particular difficulties for families in attending group sessions (for example, because of disability, needs related to diversity such as language differences, parental ill-health, problems with transport, or where other factors suggest poor prospects for therapeutic engagement) • a family's needs are too complex to be met by group-based parent-training/education programmes. (1.5.1.5)	sessions [for example, because of disability, needs related to diversity such as language differences, learning disability (intellectual disability), parental ill-health, problems with transport, or where other factors suggest poor prospects for therapeutic engagement] • a family's needs are too complex to be met by group-based parent-training/education programmes. (1.5.13)
When individual-based parent-training/education programmes for pre-school children with ADHD are undertaken, the skills training stages should involve both the parents or carers and the child. (1.5.1.6)	This recommendation has been deleted because the committee highlighted the importance of both parents or carers attending group sessions and considered that both parents or carers attending individual programmes is implicit in the complex needs or difficulties the family have.
This recommendation has been replaced by recommendations 1.5.2 and 1.5.4 in antisocial behaviour and conduct disorders in children and young people (NICE guideline CG158). (1.5.1.7)	Replaced by If a child or young person aged 5 years or over has ADHD and symptoms of oppositional defiant disorder or conduct disorder, offer parents and carers a parent-training programme in line with recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and young people as well as group-based ADHD-focused support. [2018] (1.5.11)
Consideration should be given to involving both of the parents or all carers of children or young people with ADHD in parent-training/education programmes wherever this is feasible. (1.5.1.8)	Replaced by : Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. [2018] (1.5.9)
This recommendation has been replaced by recommendations 1.5.2 and 1.5.4 in antisocial behaviour and conduct disorders in children and young people (NICE guideline CG158). (1.5.1.9)	Replaced by If a child or young person aged 5 years or over has ADHD and symptoms of oppositional defiant disorder or conduct disorder, offer parents and carers a parent-training programme in line with recommendations 1.5.1 to 1.5.10 in NICE's guideline on antisocial behaviour and conduct disorders in children and

	young people as well as group-based ADHD-focused support. [2018] (1.5.11)
If overall treatment, including parent-training/education programmes, has been effective in managing ADHD symptoms and any associated impairment in pre-school children, before considering discharge from secondary care healthcare professionals should: • review the child, with their parents or carers and siblings, for any residual coexisting conditions and develop a treatment plan for these if needed • monitor for the recurrence of ADHD symptoms and any associated impairment that may occur after the child starts school. (1.5.1.11)	This recommendation has been deleted because the committee agreed the emphasis should be on review of the symptoms and treatment not on discharge.
If overall treatment, including parent-training/education programmes, has not been effective in managing ADHD symptoms and any associated impairment in pre-school children, healthcare professionals should consider referral to tertiary services for further care. (1.5.1.12)	Replaced by: If after an ADHD-focused parent-training programme, ADHD symptoms are still causing severe impairment across more than one domain in a child under 5 years, obtain specialist advice (ideally from a tertiary service). [2018] (1.5.8)
Drug treatment is not indicated as the first-line treatment for all school-age children and young people with ADHD. It should be reserved for those with severe symptoms and impairment or for those with moderate levels of impairment who have refused non-drug interventions, or whose symptoms have not responded sufficiently to parent-training/education programmes or group psychological treatment. (1.5.2.1)	Replaced by: Offer medication to children and young people with ADHD aged 5 years and over if their ADHD symptoms are having a persistent significant impact in at least domain of their everyday life after environmental modifications. See the recommendations on medication choice [2018] (1.5.10)
Following a diagnosis of ADHD in a school-age child or young person healthcare professionals should, with the parents' or carers' consent, contact the child or young person's teacher to explain: • the diagnosis and severity of symptoms and impairment • the care plan • any special educational needs. (1.5.2.2)	Replaced by: When ADHD is diagnosed, when symptoms change, and when there is transition between schools or from school to college, obtain consent and then contact the school or college to explain: • the validity of a diagnosis of ADHD and how symptoms are likely to affect school or college life • other coexisting conditions (for example, learning disabilities) are distinct from ADHD and may need

	different adjustments • the treatment plan and identified special educational needs, including advice for environmental and learning modifications • the value of feedback from schools and colleges to people with ADHD and their healthcare professionals. [2018] (1.4.12)
Teachers who have received training about ADHD and its management should provide behavioural interventions in the classroom to help children and young people with ADHD. (1.5.2.3)	This recommendation has been deleted because the guideline is directed at people providing services for the NHS.
If the child or young person with ADHD has moderate levels of impairment, the parents or carers should be offered referral to a group parent-training/education programme, either on its own or together with a group treatment programme (CBT and/or social skills training) for the child or young person. (1.5.2.4)	Replaced by: Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. [2018] (1.5.9) Consider a course of cognitive behavioural therapy (CBT) for young people with ADHD who have benefited from medication but whose symptoms continue to have a significant impact on at least one domain of their everyday life addressing the following areas: • social skills with peers • problem-solving • self-control • active listening skills • dealing with and expressing feelings. [2018] (1.5.12)
When using group treatment (CBT and/or social skills training) for the child or young person in conjunction with a parent-training/education programme, particular emphasis should be given to targeting a range of areas, including social skills with peers, problem solving, self-control, listening skills and dealing with and expressing feelings. Active learning strategies should be used, and rewards given for achieving key elements of learning. (1.5.2.5)	Replaced by: Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. [2018] (1.5.9) Consider a course of cognitive

	behavioural therapy (CBT) for young people with ADHD who have benefited from medication but whose symptoms continue to have a significant impact on at least one domain of their everyday life addressing the following areas: • social skills with peers • problem-solving • self-control • active listening skills • dealing with and expressing feelings. (1.5.12)
For older adolescents with ADHD and moderate impairment, individual psychological interventions (such as CBT or social skills training) may be considered as they may be more effective and acceptable than group parent-training/education programmes or group CBT and/or social skills training. (1.5.2.6)	Replaced by: Consider a course of cognitive behavioural therapy (CBT) for young people with ADHD who have benefited from medication but whose symptoms continue to have a significant impact on at least one domain of their everyday life, addressing the following areas: • social skills with peers • problem-solving • self-control • active listening skills dealing with and expressing feelings. (1.5.12)
For children and young people (including older age groups) with ADHD and a learning disability, a parent training/education programme should be offered on either a group or individual basis, whichever is preferred following discussion with the parents or carers and the child or young person. (1.5.2.7)	Replaced by: Consider individual parent-training/education programmes for parents and carers of children and young people with ADHD when: • there are particular difficulties for families in attending group sessions [for example, because of disability, needs related to diversity such as language differences, learning disability (intellectual disability), parental ill-health, problems with transport, or where other factors suggest poor prospects for therapeutic engagement] • a family's needs are too complex to be met by group-based parent-training/education programmes. [2018] (1.5.13)
When parents or carers of children or young people with ADHD undertake	Replaced by: When ADHD is diagnosed, when

parent-training/education programmes, the professional delivering the sessions should consider contacting the school and providing the child or young person's teacher with written information on the areas of behavioural management covered in these sessions. This should only be done with parental consent. (1.5.2.8)	symptoms change, and when there is transition between schools or from school to college, obtain consent and then contact the school or college to explain: • the validity of a diagnosis of ADHD and how symptoms are likely to affect school or college life • other coexisting conditions (for example, learning disabilities) are distinct from ADHD and may need different adjustments • the treatment plan and identified special educational needs, including advice for environmental and learning modifications • the value of feedback from schools and colleges to people with ADHD and their healthcare professionals. [2018] (1.4.12)
Following successful treatment with a parent-training/education programme and before considering discharge from secondary care, the child or young person should be reviewed, with their parents or carers and siblings, for any residual problems such as anxiety, aggression or learning difficulties. Treatment plans should be developed for any coexisting conditions. (1.5.2.9)	This recommendation has been deleted because the committee agreed the emphasis should be on review of the symptoms and treatment not on discharge.
Following treatment with a parent-training/education programme, children and young people with ADHD and persisting significant impairment should be offered drug treatment. (1.5.2.10)	Replaced by: Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. [2018] (1.5.9)
In school-age children and young people with severe ADHD, drug treatment should be offered as the first-line treatment. Parents should also be offered a group-based parent-training/education programme. (1.5.2.11)	Replaced by: Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. [2018] (1.5.9)

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. (1.5.3.2)	This recommendation has been deleted because the committee agreed that a child or young person should only have diagnosis and treatment confirmed by a specialist in ADHD. This recommendation is at odds with recommendation 1.2.1.8 in the 2008 guideline. After titration and dose stabilisation, prescribing and monitoring should be carried out under shared care arrangements with primary care. [2018] (1.7.24)
If drug treatment is not accepted by the child or young person with severe ADHD, or their parents or carers, healthcare professionals should advise parents or carers and the child or young person about the benefits and superiority of drug treatment in this group. If drug treatment is still not accepted, a group parent training/education programme should be offered. (1.5.3.3)	Replaced by : Before starting any treatment for ADHD, discuss the following with the person, and their family or carers as appropriate, encouraging children and young people to give their own account of how they feel: • the benefits and harms of non-pharmacological and pharmacological treatments (for example, the efficacy of medications compared with no treatment or non-pharmacological treatments, potential side effects and non-response rates) • the benefits of a healthy lifestyle, including exercise • their preferences and concerns (for example, a person's decision to start, change or stop treatment may be influenced by media coverage, teachers, family members, friends and differing opinion on the validity of ADHD and specific treatments) • how other mental health or neurodevelopmental conditions might affect treatment choices • the importance of adherence to treatment and any factors that may affect this (for example, it may be difficult to take medication at school or work). Record the person's preferences and concerns in their treatment plan. [2018] (1.5.4)

	Reassure people with ADHD, and their families or carers as appropriate, that they can revisit decisions about treatments. [2018] (1.5.6).
If a group parent-training/education programme is effective in children and young people with severe ADHD who have refused drug treatment, healthcare professionals should assess the child or young person for possible coexisting conditions and develop a longer-term care plan. (1.5.3.4)	This recommendation has been deleted because this is covered in the recommendations on the review of treatment and in this new recommendation. Regularly discuss with people with ADHD, and their family members or carers, how they want to be involved in treatment planning and decisions; such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once. [2018] (1.5.3)
If a group parent-training/education programme is not effective for a child or young person with severe ADHD, and if drug treatment has not been accepted, discuss the possibility of drug treatment again or other psychological treatment (group CBT and/or social skills training), highlighting the clear benefits and superiority of drug treatment in children or young people with severe ADHD. (1.5.3.5)	Replaced by: Regularly discuss with people with ADHD, and their family members or carers, how they want to be involved in treatment planning and decisions; such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once. [2018] (1.5.3) Before starting any treatment for ADHD, discuss with the person, and their family or carers as appropriate, encouraging children and young people to give their own account of how they feel: • the benefits and harms of non-pharmacological and pharmacological treatments (for example, the efficacy of medications compared with no treatment or non-pharmacological treatments, potential side effects and non-response rates) • the benefits of a healthy lifestyle, including exercise • their preferences and concerns (for example, a person's decision to start, change or stop treatment may be influenced by media

	coverage, teachers, family members, friends and differing opinion on the validity of ADHD and specific treatments) • how other mental health or neurodevelopmental conditions might affect treatment choices • the importance of adherence to treatment and any factors that may affect this (for example, it may be difficult to take medication at school or work). Record the person's preferences and concerns in their treatment plan. [2018] (1.5.4) Reassure people with ADHD, and their families or carers as appropriate, that they can revisit decisions about treatments. [2018] (1.5.6). Ensure that children, young people and adults receiving treatment for ADHD have review and follow-up according to the severity of their condition, regardless of whether or not they are taking medication. [2018] (1.8.3)
Following a diagnosis of severe ADHD in a school-age child or young person healthcare professionals should, with the parents' or carers' consent, contact the child or young person's teacher to explain: • the diagnosis and severity of symptoms and impairment • the care plan • any special educational needs. (1.5.3.6)	Replaced by: When ADHD is diagnosed, when symptoms change, and when there is transition between schools or from school to college, obtain consent and then contact, the school or college to explain: • the validity of a diagnosis of ADHD and how symptoms are likely to affect school or college life • other coexisting conditions (for example, learning disabilities) are distinct from ADHD and may need different adjustments • the treatment plan and identified special educational needs, including advice for environmental and learning modifications • the value of feedback from schools and colleges to people with ADHD and their healthcare professionals. (1.4.12)
Teachers who have received training about ADHD and its management should	This recommendation has been deleted because the guideline is directed at

provide behavioural interventions in the classroom to help children and young people with ADHD. (1.5.3.7)	people providing services for the NHS.
Before starting drug treatment, children and young people with ADHD should have a full pre-treatment assessment, which should include: • full mental health and social assessment • full history and physical examination, including: – assessment of history of exercise syncope, undue breathlessness and other cardiovascular symptoms – heart rate and blood pressure (plotted on a centile chart) – height and weight (plotted on a growth chart) – family history of cardiac disease and examination of the cardiovascular system • an electrocardiogram (ECG) if there is past medical or family history of serious cardiac disease, a history of sudden death in young family members or abnormal findings on cardiac examination • risk assessment for substance misuse and drug diversion (where the drug is passed on to others for non-prescription use). (1.5.4.1)	Replaced by: Before starting medication, people with ADHD should have a full assessment, which should include: • a review to confirm they continue to meet the criteria for ADHD and need treatment • 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 drug diversion – care needs • a review of physical health, including: – a medical history, taking into account 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) – an ECG if the treatment may affect the QT interval (for example, tricyclics and monoamine oxidase inhibitors). [2018] (1.7.2) Refer for a cardiology 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, which could suggest a family history of cardiomyopathy or channelopathy • 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 • blood pressure consistently above the 95th centile for age and height. [2018] (1.7.3)
Drug treatment for children and young people with ADHD should always form part of a comprehensive treatment plan that includes psychological, behavioural and educational advice and interventions. (1.5.4.2)	Replaced by this recommendation that applies to all children and young people aged 5 years and over with ADHD: Offer parents and carers of all children and young people aged 5 years and over with ADHD, group-based ADHD-focused support that includes education and information on the causes and impacts of ADHD and advice on parenting strategies. This may be as few as 1 or 2 sessions and should include both parents and carers if feasible. [2018] (1.5.9) Ensure that people with ADHD have a comprehensive, holistic shared treatment plan that addresses psychological, behavioural and occupational or educational needs. Take into account: • the severity of ADHD symptoms and how these affect or may affect a person's life • their goals • the level of impairment and impact on their everyday life • their resilience and protective factors • the relative impact of other neurodevelopmental or mental

	health conditions. [2018] (1.5.2)
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. (1.5.5.1)	Replaced by: Offer methylphenidate as first-line pharmacological treatment for children aged 5 years and over and young people with ADHD. (1.7.4) Consider lisdexamfetamine for children aged 5 years and over and young people whose ADHD symptoms are not responding adequately to methylphenidate. [2018] (1.7.5) Consider dexamfetamine for children aged 5 years and over and young people whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile. (1.7.6) Offer atomoxetine or guanfacine to children aged 5 years and over and young people if: • they cannot tolerate methylphenidate or lisdexamfetamine, or • their symptoms have not responded to separate 6-week trials of lisdexamfetamine and methylphenidate, having tried alternative formulations and adequate doses. (1.7.7)
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	Replaced by: Before starting medication, people with ADHD should have a full assessment, which should include: • a review to confirm they continue to meet the criteria for ADHD and need treatment • 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 drug diversion

child/adolescent and/or his or her parent or guardian. (1.5.5.2)	– care needs • a review of physical health, including: – a medical history, taking into account 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) – an ECG if the treatment may affect the QT interval (for example, tricyclics and monoamine oxidase inhibitors). [2018] (1.7.2)
When a decision has been made to treat children or young people with ADHD with drugs, healthcare professionals should consider: • methylphenidate for ADHD without significant comorbidity • methylphenidate for ADHD with comorbid conduct disorder • methylphenidate or atomoxetine when tics, Tourette's syndrome, anxiety disorder, stimulant misuse or risk of stimulant diversion are present • atomoxetine if methylphenidate has been tried and has been ineffective at the • maximum tolerated dose, or the child or young person is intolerant to low or moderate doses of methylphenidate. (1.5.5.3)	Replaced by: Offer methylphenidate as first-line pharmacological treatment for children aged 5 years and over and young people with ADHD. (1.7.4) Consider lisdexamfetamine for children aged 5 years and over and young people whose ADHD symptoms are not responding adequately to methylphenidate. [2018] (1.7.5) Consider dexamfetamine for children aged 5 years and over and young people whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile. (1.7.6) Offer atomoxetine or guanfacine to children aged 5 years and over and young people if: • they cannot tolerate methylphenidate or lisdexamfetamine, or • their symptoms have not responded to separate 6-week trials of lisdexamfetamine and methylphenidate, having tried alternative formulations and

	adequate doses. (1.7.7)

When prescribing methylphenidate for the treatment of children or young people, modified-release preparations should be considered for the following reasons: • convenience • improving adherence • reducing stigma (because the child or young person does not need to take medication at school) • reducing problems schools have in storing and administering controlled drugs • their pharmacokinetic profiles. Alternatively, immediate-release preparations may be considered if more flexible dosing regimens are required, or during initial titration to determine correct dosing levels. (1.5.5.4)	Replaced by: When prescribing stimulants for ADHD, think about modified-release once-daily preparations for the following reasons: • convenience • improving adherence • reducing stigma (because there is no need to take medication at school or in the workplace) • reducing problems of storing and administering controlled drugs at school • the risk of stimulant misuse and diversion with immediate-release preparations • their pharmacokinetic profiles. Immediate-release preparations may be suitable if more flexible dosing regimens are needed, or during initial titration to determine correct dosing levels. (1.7.25)
When starting drug treatment children and young people should be monitored for side effects. In particular, those treated with atomoxetine should be closely observed for agitation, irritability, suicidal thinking and self-harming behaviour, and unusual changes in behaviour, particularly during the initial months of treatment, or after a change in dose. Parents and/or carers should be warned about the potential for suicidal thinking and self-harming behaviour with atomoxetine and asked to report these to their healthcare professionals. Parents or carers should also be warned about the potential for liver damage in rare cases with atomoxetine (usually presenting as abdominal pain, unexplained nausea, malaise, darkening of the urine or jaundice). (1.5.5.5)	This recommendation has been deleted because it has been replaced by section *1.8 Follow-up and monitoring*.
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. (1.5.5.6)	This recommendation has been deleted because this is implicit in the cost effectiveness decision making.
Antipsychotics are not recommended for the treatment of ADHD in children and young people. (1.5.5.7)	This recommendation has been deleted because they are not recommended.
If there has been a poor response following parent-training/education	Replaced by :

programmes and/or psychological treatment and treatment with methylphenidate and atomoxetine in a child or young person with ADHD, there should be a further review of: • the diagnosis • any coexisting conditions • response to drug treatment, occurrence of side effects and treatment adherence • uptake and use of psychological interventions for the child or young person and their parents or carers • effects of stigma on treatment acceptability • concerns related to school and/or family • motivation of the child or young person and the parents or carers • the child or young person's diet. (1.5.6.1)	Obtain a second opinion or refer to tertiary services if ADHD symptoms in a child aged 5 years or over, a young person or adult are unresponsive to one or more stimulants and one non-stimulant. [2018] (1.7.12)
Following review of poor response to treatment, a dose higher than that licensed for methylphenidate or atomoxetine should be considered following consultation with a tertiary or regional centre. This may exceed 'British national formulary' (BNF) recommendations: methylphenidate can be increased to 0.7 mg/kg per dose up to three times a day or a total daily dose of 2.1 mg/kg/day (up to a total maximum dose of 90 mg/day for immediate release; or an equivalent dose of modified-release methylphenidate)[5]; atomoxetine may be increased to 1.8 mg/kg/day (up to a total maximum dose of 120 mg/day). The prescriber should closely monitor the child or young person for side effects. (1.5.6.2)	This recommendation has been replaced by the initiation and titration section.
Dexamfetamine should be considered in children and young people whose ADHD is unresponsive to a maximum tolerated dose of methylphenidate or atomoxetine. (1.5.6.3)	Replaced by: Consider dexamfetamine for children aged 5 years and over and young people whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile. (1.7.6)
In children and young people whose ADHD is unresponsive to methylphenidate, atomoxetine and dexamfetamine, further treatment should	Replaced by: Obtain a second opinion or refer to tertiary services if ADHD symptoms in a

only follow after referral to tertiary services. Further treatment may include the use of medication unlicensed for the treatment of ADHD (such as bupropion, clonidine, modafinil and imipramine) or combination treatments (including psychological treatments for the parent or carer and the child or young person). The use of medication unlicensed for ADHD should only be considered in the context of tertiary services. (1.5.6.4)	child aged 5 years or over, a young person or adult are unresponsive to one or more stimulants and one non-stimulant. (1.7.12) Do not offer any medication for ADHD other than in recommendations 1.7.4 to 1.7.11 outside a specialist (tertiary) ADHD service (for example, guanfacine for adults, clonidine for children with ADHD and sleep disturbance, rages or tics). (1.7.13)
A cardiovascular examination and ECG should be carried out before starting treatment with clonidine in children or young people with ADHD. (1.5.6.5)	Replaced by: Before starting medication, people with ADHD should have a full assessment, which should include: • a review to confirm they continue to meet the criteria for ADHD and need treatment • 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 drug diversion – care needs • a review of physical health, including: – a medical history, taking into account 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) – an ECG if the treatment may affect the QT interval (for

	example, tricyclics and monoamine oxidase inhibitors). (1.7.2) Refer for a cardiology 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, which could suggest a family history of cardiomyopathy or channelopathy • 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 • blood pressure consistently above the 95th centile for age and height. (1.7.3)
For adults with ADHD, drug treatment[7] should be the first-line treatment unless the person would prefer a psychological approach. (1.7.11)	Replaced by: Offer medication to adults with ADHD if their ADHD symptoms are having a significant impact on at least one domain of their everyday life after environmental modifications. See the recommendations on medication choice. (1.5.14)
Drug treatment for adults with ADHD should be started only under the guidance of a psychiatrist, nurse prescriber specialising in ADHD, or other clinical prescriber with training in the diagnosis and management of ADHD.	This recommendation has been deleted because the committee agreed that a child or young person should only have diagnosis and treatment confirmed by a specialist in ADHD as is stated in the recommendations on diagnosis in the guideline.
Before starting drug treatment for adults with ADHD a full assessment should be completed, which should include: • full mental health and social assessment	Before starting medication, people with ADHD should have a full assessment, which should include: • a review to confirm they continue to meet the criteria for ADHD and

• full history and physical examination, including: – assessment of history of exercise syncope, undue breathlessness and other cardiovascular symptoms – heart rate and blood pressure (plotted on a centile chart) – weight – family history of cardiac disease and examination of the cardiovascular system • an ECG if there is past medical or family history of serious cardiac disease, a history of • sudden death in young family members or abnormal findings on cardiac examination • risk assessment for substance misuse and drug diversion. (1.7.1.3)	need treatment • 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 drug diversion – care needs • a review of physical health, including: – a medical history, taking into account 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) – an ECG if the treatment may affect the QT interval (for example, tricyclics and monoamine oxidase inhibitors). (1.7.2) Refer for a cardiology 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, which could suggest a family history of cardiomyopathy or channelopathy • 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 • blood pressure consistently above the 95th centile for age and height. (1.7.3)
Drug treatment for adults with ADHD should always form part of a comprehensive treatment programme that addresses psychological, behavioural and educational or occupational needs. (1.7.1.4)	Replaced by: Ensure that people with ADHD have a comprehensive, holistic shared treatment plan that addresses psychological, behavioural and occupational or educational needs. Take into account: • the severity of ADHD symptoms and how these affect or may affect a person's life • their goals • the level of impairment and impact on their everyday life • their resilience and protective factors • the relative impact of other neurodevelopmental or mental health conditions. [2018] (1.5.2)
Following a decision to start drug treatment in adults with ADHD, methylphenidate should normally be tried first. (1.7.1.5)	Replaced by: Offer lisdexamfetamine as first-line pharmacological treatment for adults with ADHD. (1.7.8)
Atomoxetine or dexamfetamine should be considered in adults unresponsive or intolerant to an adequate trial of methylphenidate (this should usually be about 6 weeks). Caution should be exercised when prescribing dexamfetamine to those likely to be at risk of stimulant misuse or diversion. (1.7.1.6)	Replaced by: Consider dexamfetamine for adults whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile. (1.7.10) Offer atomoxetine to adults if: • they cannot tolerate lisdexamfetamine or methylphenidate, or • their symptoms have not responded to separate 6-week trials of lisdexamfetamine and methylphenidate, having considered alternative formulations and doses. (1.7.11)
When starting drug treatment, adults	This recommendation has been deleted

should be monitored for side effects. In particular, people treated with atomoxetine should be observed for agitation, irritability, suicidal thinking and self-harming behaviour, and unusual changes in behaviour, particularly during the initial months of treatment, or after a change in dose. They should also be warned of potential liver damage in rare cases (usually presenting as abdominal pain, unexplained nausea, malaise, darkening of the urine or jaundice). Younger adults aged 30 years or younger should also be warned of the potential of atomoxetine to increase agitation, anxiety, suicidal thinking and self-harming behaviour in some people, especially during the first few weeks of treatment. (1.7.1.7)	because it has been replaced by section *1.8 Follow-up and monitoring*.
For adults with ADHD stabilised on medication but with persisting functional impairment associated with the disorder, or where there has been no response to drug treatment, a course of either group or individual CBT to address the person's functional impairment should be considered. Group therapy is recommended as the first-line psychological treatment because it is the most cost effective. (1.7.1.8)	Replaced by: Consider non-pharmacological treatment in combination with medication for adults with ADHD who have benefited from medication but whose symptoms continue to have a significant impact on at least one domain of their everyday life. (1.5.16)
For adults with ADHD, CBT may be considered when: • the person has made an informed choice not to have drug treatment • drug treatment has proved to be only partially effective or ineffective or the person is intolerant to it • people have difficulty accepting the diagnosis of ADHD and accepting and adhering to drug treatment • symptoms are remitting and psychological treatment is considered sufficient to target residual (mild to moderate) functional impairment. (1.7.1.9)	Replaced by: Consider non-pharmacological treatment for adults with ADHD who have: • made an informed choice not to have medication • difficulty adhering to medication • found medication to be ineffective or cannot tolerate it. (1.5.15)
Where there may be concern about the potential for drug misuse and diversion (for example, in prison services), atomoxetine may be considered as the first-line drug treatment for ADHD in	Replaced by: Do not offer immediate-release stimulants or modified-release stimulants that can be easily injected or insufflated if there is a risk of stimulant misuse or

adults. (1.7.1.10)	diversion. [2018] (1.7.15) Be cautious about prescribing stimulants for ADHD if there is a risk of stimulant diversion for cognitive enhancement or appetite suppression. [2018] (1.7.16)
Drug treatment for adults with ADHD who also misuse substances should only be prescribed by an appropriately qualified healthcare professional with expertise in managing both ADHD and substance misuse. For adults with ADHD and drug or alcohol addiction disorders there should be close liaison between the professional treating the person's ADHD and an addiction specialist. (1.7.1.11)	This recommendation has been deleted because the committee considered that this described most professionals with expertise in ADHD. A multidisciplinary approach includes this close liaison.
Antipsychotics are not recommended for the treatment of ADHD in adults. (1.7.1.12)	This recommendation has been deleted because they aren't recommended.
Prescribers should be familiar with the pharmacokinetic profiles of all the modified-release and immediate-release preparations available for ADHD to ensure that treatment is tailored effectively to the individual needs of the child, young person or adult. (1.8.1.1)	Replaced by: Healthcare professionals initiating pharmacological treatment should be familiar with the pharmacokinetic profiles of all the modified-release and immediate-release preparations available for ADHD to ensure that treatment is tailored effectively to the individual needs of the child, young person or adult. Different preparations may vary in bioavailability or pharmacokinetic profiles and care needs to be taken to avoid reduced effect or excessive side effects. (1.7.19)
Prescribers should be familiar with the requirements of controlled drug legislation governing the prescription and supply of stimulants. (1.8.1.2)	Replaced by: Prescribers should be familiar with the requirements of controlled drug legislation governing the prescription and supply of stimulants. See NICE's guideline on controlled drugs. (1.7.20)
During the titration phase, doses should be gradually increased until there is no further clinical improvement in ADHD (that is, symptom reduction, behaviour change, improvements in education and/or relationships) and side effects are tolerable. (1.8.1.3)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. (1.7.23)
Following titration and dose stabilisation, prescribing and monitoring should be carried out under locally agreed shared care arrangements with primary care. (1.8.1.4)	Replaced by: After titration and dose stabilisation, prescribing and monitoring should be carried out under shared care

	arrangements with primary care. (1.7.24)
Side effects resulting from drug treatment for ADHD should be routinely monitored and documented in the person's notes. (1.8.1.5)	Replaced by: Monitor side effects resulting from medication for ADHD and document in the person's notes. (1.8.1)
If side effects become troublesome in people receiving drug treatment for ADHD, a reduction in dose should be considered. (1.8.1.6)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)
Healthcare professionals should be aware that dose titration should be slower if tics or seizures are present in people with ADHD. (1.8.1.7)	Replaced by: Ensure that dose titration is slower and monitoring more frequent if any of the following are present in people with ADHD: • neurodevelopmental disorders [for example, autism spectrum disorder, tic disorders, learning disability (intellectual disability)] • mental health conditions [for example, anxiety disorders (including obsessive–compulsive disorder), schizophrenia or bipolar disorder, depression, personality disorder, eating disorder, post-traumatic stress disorder, substance misuse] • physical health conditions (for example, epilepsy or acquired brain injury). (1.7.21)
During the titration phase, symptoms and side effects should be recorded at each dose change on standard scales (for example, Conners' 10-item scale) by parents and teachers, and progress reviewed regularly (for example, by weekly telephone contact and at each dose change) with a specialist clinician. (1.8.2.1)	Replaced by: During the titration phase, symptoms and side effects should be recorded at baseline and at each dose change on standard scales (for example, Conners' 10-item scale) by parents and teachers and progress reviewed regularly (for example, by weekly telephone contact) with a specialist. (1.7.22)
If using methylphenidate in children and young people with ADHD aged 6 years and older: • initial treatment should begin with low doses of immediate-release or modified-release preparations consistent with starting doses in the BNF	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)

• the dose should be titrated against symptoms and side effects over 4–6 weeks until dose optimisation is achieved • modified-release preparations should be given as a single dose in the morning • immediate-release preparations should be given in two or three divided doses. (1.8.2.2)	
If using atomoxetine in children and young people with ADHD aged 6 years and older: • for those weighing up to 70 kg, the initial total daily dose should be approximately 0.5 mg/kg; the dose should be increased after 7 days to approximately 1.2 mg/kg/day • for those weighing more than 70 kg, the initial total daily dose should be 40 mg; the dose should be increased after 7 days up to a maintenance dose of 80 mg/day • a single daily dose can be given; two divided doses may be prescribed to minimise side effects. (1.8.2.3)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)
If using dexamfetamine in children and young people with ADHD: • initial treatment should begin with low doses consistent with starting doses in the BNF • the dose should be titrated against symptoms and side effects over 4–6 weeks • treatment should be given in divided doses increasing to a maximum of 20 mg/day • for children aged 6–18 years, doses up to 40 mg/day may occasionally be required. (1.8.2.4)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)
In order to optimise drug treatment, the initial dose should be titrated against symptoms and side effects over 4–6 weeks. (1.8.3.1)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)
During the titration phase, symptoms and	Replaced by:

side effects should be recorded at each dose change by the prescriber after discussion with the person with ADHD and, wherever possible, a carer (for example, a spouse, parent or close friend). Progress should be reviewed (for example, by weekly telephone contact and at each dose change) with a specialist clinician. (1.8.3.2)	During the titration phase, symptoms and side effects should be recorded at baseline and at each dose change on standard scales (for example, Conners' 10-item scale) by parents and teachers and progress reviewed regularly (for example, by weekly telephone contact) with a specialist. [2018] (1.7.22)
If using methylphenidate in adults with ADHD: • initial treatment should begin with low doses (5 mg three times daily for immediate-release preparations; the equivalent dose for modified-release preparations) • the dose should be titrated against symptoms and side effects over 4–6 weeks • the dose should be increased according to response up to a maximum of 100 mg/day • modified-release preparations should usually be given once daily and no more than twice daily • modified-release preparations may be preferred to increase adherence and in circumstances where there are concerns about substance misuse or diversion • immediate-release preparations should be given up to four times daily. (1.8.3.3)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)
If using atomoxetine in adults with ADHD: • for people with ADHD weighing up to 70 kg, the initial total daily dose should be approximately 0.5 mg/kg; the dose should be increased after 7 days to approximately 1.2 mg/kg/day • for people with ADHD weighing more than 70 kg, the initial total daily dose should be 40 mg; the dose should be increased after 7 days up to a maintenance dose of 100 mg/day • the usual maintenance dose is either 80 or 100 mg, which may be taken in divided doses • a trial of 6 weeks on a maintenance dose should be	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)

allowed to evaluate the full effectiveness of atomoxetine. (1.8.3.4)	
If using dexamfetamine in adults with ADHD: • initial treatment should begin with low doses (5 mg twice daily) • the dose should be titrated against symptoms and side effects over 4–6 weeks • treatment should be given in divided doses • the dose should be increased according to response up to a maximum of 60 mg/day • the dose should usually be given between two and four times daily. (1.8.3.5)	Replaced by: Titrate the dose against symptoms and side effects in line with the BNF until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable side effects. [2018] (1.7.23)
Healthcare professionals should consider using standard symptom and side effect rating scales throughout the course of treatment as an adjunct to clinical assessment for people with ADHD. (1.8.4.1)	Replaced by: Consider using standard symptom and side effect rating scales for clinical assessment and throughout the course of treatment for people with ADHD. (1.8.2)
In people taking methylphenidate, atomoxetine, or dexamfetamine: • height should be measured every 6 months in children and young people • weight should be measured 3 and 6 months after drug treatment has started and every 6 months thereafter in children, young people and adults • height and weight in children and young people should be plotted on a growth chart and reviewed by the healthcare professional responsible for treatment. (1.8.4.2)	Replaced by: For people taking medication for ADHD: • measure height every 6 months in children and young people • measure weight 3 and 6 months after starting treatment and every 6 months thereafter, or more often if concerns arise • plot height and weight of children and young people on a growth chart and ensure review by the healthcare professional responsible for treatment. (1.8.4)
If there is evidence of weight loss associated with drug treatment in adults with ADHD, healthcare professionals should consider monitoring body mass index and changing the drug if weight loss persists. (1.8.4.3)	Replaced by: Consider monitoring body mass index of adults with ADHD if there has been weight change as a result of their treatment, and changing the medication if weight change persists. (1.8.5)
Strategies to reduce weight loss in people with ADHD, or manage decreased weight gain in children, include:	Replaced by: If weight loss is a clinical concern consider the following strategies: • taking medication either with or

• taking medication either with or after food, rather than before meals • taking additional meals or snacks early in the morning or late in the evening when the stimulant effects of the drug have worn off • obtaining dietary advice • consuming high-calorie foods of good nutritional value.	after food, rather than before meals • taking additional meals or snacks early in the morning or late in the evening when stimulant effects have worn off • obtaining dietary advice • consuming high-calorie foods of good nutritional value • a planned break in treatment. (1.8.6)
If growth is significantly affected by drug treatment (that is, the child or young person has not met the height expected for their age), the option of a planned break in treatment over school holidays should be considered to allow 'catch-up' growth to occur. (1.8.4.5)	Replaced by: If a child or young person's height or weight over time is significantly affected by medication (that is, they have not met the height expected for their age), consider a planned break in treatment over school holidays to allow 'catch-up' growth. (1.8.7)
In people with ADHD, heart rate and blood pressure should be monitored and recorded on a centile chart before and after each dose change and routinely every 3 months. (1.8.4.6)	Replaced by: Monitor heart rate and blood pressure and compare with the normal range for age before and after each dose change and every 6 months. (1.8.8)
For people taking methylphenidate, dexamfetamine and atomoxetine, routine blood tests and ECGs are not recommended unless there is a clinical indication. (1.8.4.7)	Replaced by: Do not offer routine blood tests (including liver function tests) or ECGs to people taking medication for ADHD unless there is a clinical indication. (1.8.9)
Liver damage is a rare and idiosyncratic adverse effect of atomoxetine and routine liver function tests are not recommended. (1.8.4.8)	Replaced by: Do not offer routine blood tests (including liver function tests) or ECGs to people taking medication for ADHD unless there is a clinical indication. (1.8.9)
For children and young people taking methylphenidate and dexamfetamine, healthcare professionals and parents or carers should monitor changes in the potential for drug misuse and diversion, which may come with changes in circumstances and age. In these situations, modified-release methylphenidate or atomoxetine may be preferred. (1.8.4.9)	Replaced by: Healthcare professionals and parents or carers should monitor changes in the potential for stimulant misuse and diversion, which may come with changes in circumstances and age. (1.8.17)
In young people and adults, sexual dysfunction (that is, erectile and ejaculatory dysfunction) and dysmenorrhoea should be monitored as potential side effects of atomoxetine. (1.8.4.10)	Replaced by: Monitor young people and adults for sexual dysfunction (that is, erectile and ejaculatory dysfunction) and dysmenorrhoea as potential side effects of atomoxetine. (1.8.13)
For people taking methylphenidate,	Replaced by:

dexamfetamine or atomoxetine who have sustained resting tachycardia, arrhythmia or systolic blood pressure greater than the 95th percentile (or a clinically significant increase) measured on two occasions should have their dose reduced and be referred to a paediatrician or adult physician. (1.8.4.11)	If a person taking ADHD medication has sustained resting tachycardia (more than 120 beats per minute), arrhythmia or systolic blood pressure greater than the 95th percentile (or a clinically significant increase) measured on 2 occasions, reduce their dose and refer them to a paediatric cardiologist or adult physician. (1.8.10)
If psychotic symptoms (for example, delusions and hallucinations) emerge in children, young people and adults after starting methylphenidate or dexamfetamine, the drug should be withdrawn and a full psychiatric assessment carried out. Atomoxetine should be considered as an alternative. (1.8.4.12)	Replaced by: For children aged 5 years and over, young people and adults with ADHD experiencing an acute psychotic or manic episode: • do not offer any new medication for ADHD and • stop any previously prescribed medication for ADHD. (1.7.17)
If seizures are exacerbated in a child or young person with epilepsy, or de novo seizures emerge following the introduction of methylphenidate or atomoxetine, the drug should be discontinued immediately. Dexamfetamine may be considered as an alternative in consultation with a regional tertiary specialist treatment centre. (1.8.4.13)	Replaced by: If a person with ADHD develops new seizures or a worsening of existing seizures, review their ADHD medication and stop any medication that might be contributing to the seizures. After investigation cautiously reintroduce ADHD medication if it is unlikely to be the cause of the seizures. (1.8.14)
If tics emerge in people taking methylphenidate or dexamfetamine, healthcare professionals should consider whether: • the tics are stimulant-related (tics naturally wax and wane) • tic-related impairment outweighs the benefits of ADHD treatment. If tics are stimulant-related, reduce the dose of methylphenidate or dexamfetamine, consider changing to atomoxetine, or stop drug treatment. (1.8.4.14)	Replaced by: If a person taking stimulants develops tics, think about whether: • the tics are related to the stimulant (tics naturally wax and wane) and • the impairment associated with the tics outweighs the benefits of ADHD treatment. If tics are stimulant related, reduce the stimulant dose, or consider changing to guanfacine (in children aged 5 years over and young people only), atomoxetine or adding clonidine or stopping medication. (1.8.12)
Anxiety symptoms, including panic, may be precipitated by stimulants, particularly in adults with a history of coexisting anxiety. Where this is an issue, lower doses of the stimulant and/or combined treatment with an antidepressant used to treat anxiety can be used; switching to atomoxetine may be effective. (1.8.4.15)	Replaced by: Offer the same medication choices to children aged 5 years and over, young people and adults with ADHD who have an anxiety disorder, tic disorder or autism spectrum disorder as other people with ADHD. [2018] (1.7.14)
Communication between the prescriber and the child or young person should be	Replaced by:

improved by educating parents or carers and ensuring there are regular three-way conversations between prescriber, parent or carer and the child or young person. For adults with ADHD, and with their permission, a spouse, partner, parent, close friend or carer wherever possible should be part of these conversations. Clear instructions about how to take the drug should be offered in picture or written format, which may include information on dose, duration, side effects, dosage schedule, the need for supervision and how this should be done. (1.8.5.1)	Encourage the person with ADHD to use the following strategies to support adherence to treatment: • being responsible for their own health, including taking their medication as needed • following clear instructions about how to take the medication in picture or written format, which may include information on dose, duration, side effects, dosage schedule (the instructions should stay with the medication, for example, a sticker on the side of the packet) • using visual reminders to take medication regularly (for example, apps, alarms, clocks, pill dispensers, or notes on calendars or fridges) • taking medication as part of their daily routine (for example, before meals or after brushing teeth) • attending peer support groups (for both the person with ADHD and for the families and carers). [2018] (1.9.4) Throughout the recommendations the emphasis is on encouraging three way communication with the person with ADHD their parents, carers and family members and the healthcare professionals.
Healthcare professionals should consider suggesting peer-support groups for the child or young person with ADHD and their parents or carers if adherence to drug treatment is difficult or uncertain. (1.8.5.2)	Replaced by: Encourage the person with ADHD to use the following strategies to support adherence to treatment: • being responsible for their own health, including taking their medication as needed • following clear instructions about how to take the medication in picture or written format, which may include information on dose, duration, side effects, dosage schedule (the instructions should stay with the medication, for example, a sticker on the side of the packet) • using visual reminders to take medication regularly (for example, apps, alarms, clocks, pill

	dispensers, or notes on calendars or fridges) • taking medication as part of their daily routine (for example, before meals or after brushing teeth) • attending peer support groups (for both the person with ADHD and for the families and carers). [2018] (1.9.4)

Simple drug regimens (for example, once-daily modified-release doses) are recommended for people with ADHD. (1.8.5.3)	Replaced by: When prescribing stimulants for ADHD, think about modified-release once-daily preparations for the following reasons: • convenience • improving adherence • reducing stigma (because there is no need to take medication at school or in the workplace) • reducing problems of storing and administering controlled drugs at school • the risk of stimulant misuse and diversion with immediate-release preparations • their pharmacokinetic profiles. Immediate-release preparations may be suitable if more flexible dosing regimens are needed, or during initial titration to determine correct dosing levels. (1.7.25)
Healthcare professionals should encourage children and young people with ADHD to be responsible for their own health, including taking their medication as required, and support parents and carers in this endeavour. (1.8.5.4)	Replaced by: Encourage the person with ADHD to use the following strategies to support adherence to treatment: • being responsible for their own health, including taking their medication as needed • following clear instructions about how to take the medication in picture or written format, which may include information on dose, duration, side effects, dosage schedule (the instructions should stay with the medication, for example, a sticker on the side of the packet) • using visual reminders to take medication regularly (for example, apps, alarms, clocks, pill dispensers, or notes on calendars or fridges) • taking medication as part of their daily routine (for example, before meals or after brushing teeth) • attending peer support groups (for both the person with ADHD and for the families and carers). [2018] (1.9.4)
Healthcare professionals should advise parents or carers to provide the child or young person with visual reminders to take medication regularly (for example, alarms, clocks, pill boxes, or notes on	Replaced by: Encourage the person with ADHD to use the following strategies to support adherence to treatment: • being responsible for their own health, including taking their

calendars or fridges). (1.8.5.5)	medication as needed • following clear instructions about how to take the medication in picture or written format, which may include information on dose, duration, side effects, dosage schedule (the instructions should stay with the medication, for example, a sticker on the side of the packet) • using visual reminders to take medication regularly (for example, apps, alarms, clocks, pill dispensers, or notes on calendars or fridges) • taking medication as part of their daily routine (for example, before meals or after brushing teeth) • attending peer support groups (for both the person with ADHD and for the families and carers). [2018] (1.9.4)
Healthcare professionals should advise children and young people and their parents or carers that taking medication should be incorporated into daily routines (for example, before meals or after brushing teeth). (1.8.5.6)	Replaced by: Encourage the person with ADHD to use the following strategies to support adherence to treatment: • being responsible for their own health, including taking their medication as needed • following clear instructions about how to take the medication in picture or written format, which may include information on dose, duration, side effects, dosage schedule (the instructions should stay with the medication, for example, a sticker on the side of the packet) • using visual reminders to take medication regularly (for example, apps, alarms, clocks, pill dispensers, or notes on calendars or fridges) • taking medication as part of their daily routine (for example, before meals or after brushing teeth) • attending peer support groups (for both the person with ADHD and for the families and carers). [2018] (1.9.4)
Where necessary, healthcare professionals should help parents or carers develop a positive attitude and approach in the management of	This recommendation has been deleted because it is part of the advice given to parents in the ADHD focused training programmes.

medication, which might include praise and positive reinforcement for the child or young person with ADHD. (1.8.5.7)	
Following an adequate treatment response, drug treatment for ADHD should be continued for as long as it remains clinically effective. This should be reviewed at least annually. The review should include a comprehensive assessment of clinical need, benefits and side effects, taking into account the views of the child or young person, as well as those of parents, carers and teachers, and how these views may differ. The effect of missed doses, planned dose reductions and brief periods of no treatment should be taken into account and the preferred pattern of use should also be reviewed. Coexisting conditions should be reviewed, and the child or young person treated or referred if necessary. The need for psychological and social support for the child or young person and for the parents or other carers should be assessed. (1.8.6.1)	Replaced by: An ADHD specialist should review ADHD medication at least once a year and 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: • preference of the child, young person or adult with ADHD (and their family or carers as appropriate) • benefits, including how well the current treatment is working • side effects • clinical need and whether drug optimisation has been achieved • impact on education and 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 • the need for and type of support required (for example, psychological, educational, social support) if medication has been optimised but ADHD symptoms continue to have a significant impact. [2018] (1.10.1)
Drug holidays are not routinely recommended; however, consideration should be given to the parent or carer and child or young person with ADHD working with their healthcare professional to find the best pattern of use, which may include periods without drug treatment. (1.8.6.2)	Replaced by: Encourage people with ADHD to discuss any preferences to stop or change medication and to be involved in any decisions about stopping treatments. [2018] (1.10.2) Consider trial periods of stopping medication or reducing the dose when assessment of the overall balance of benefits and harms suggests this may be appropriate. [2018] (1.10.3)
Following an adequate response, drug treatment for ADHD should be continued for as long as it is clinically effective. This should be reviewed annually. The review should include a comprehensive	Replaced by: An ADHD specialist should review ADHD medication at least once a year and discuss with the person with ADHD (and their families and carers as appropriate) whether medication should be continued.

assessment of clinical need, benefits and side effects, taking into account the views of the person and those of a spouse, partner, parent, close friends or carers wherever possible, and how these accounts may differ. The effect of missed doses, planned dose reductions and brief periods of no treatment should be taken into account and the preferred pattern of use should also be reviewed. Coexisting conditions should be reviewed, and the person treated or referred if necessary. The need for psychological, social and occupational support for the person and their carers should be assessed. (1.8.7.1)	The review should include a comprehensive assessment of the: • preference of the child, young person or adult with ADHD (and their family or carers as appropriate) • benefits, including how well the current treatment is working • side effects • clinical need and whether rug optimisation has been achieved • impact on education and 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 • the need for and type of support required (for example, psychological, educational, social support) if medication has been optimised but ADHD symptoms continue to have a significant impact. [2018] (1.10.1)
An individual treatment approach is important for adults, and healthcare professionals should regularly review (at least annually) the need to adapt patterns of use, including the effect of drug treatment on coexisting conditions and mood changes. (1.8.7.2)	Replaced by : Regularly discuss with people with ADHD, and their family members or carers, how they want to be involved in treatment planning and decisions; such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once. [2018] (1.5.3) An ADHD specialist should review ADHD medication at least once a year and 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: • preference of the child, young person or adult with ADHD (and their family or carers as appropriate) • benefits, including how well the current treatment is working • side effects • clinical need and whether drug optimisation has been achieved

	• impact on education and 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 the need for and type of support required (for example, psychological, educational, social support) if medication has been optimised but ADHD symptoms continue to have a significant impact[2018] (1.10.1)

1

2 **Amended recommendation wording (change to meaning)**

Recommendation in 2008 guideline	Recommendation in current guideline	Reason for change
1.1.2 Mental health trusts, and children's trusts that provide mental health/child development services, should form multidisciplinary specialist ADHD teams and/or clinics for children and young people and separate teams and/or clinics for adults. These teams and clinics should have expertise in the diagnosis and management of ADHD, and should: • provide diagnostic, treatment and consultation services for people with ADHD who have complex needs, or where general psychiatric services are in doubt about the diagnosis and/or management of ADHD • put in place systems of communication and protocols for information sharing among paediatric, child and adolescent, forensic, and adult mental health services for people with ADHD, including arrangements for transition between child and adult	Mental health services for children, young people and adults and child health services, should form multidisciplinary specialist ADHD teams and/or clinics for children and young people and separate teams and/or clinics for adults. These teams and clinics should have expertise in the diagnosis and management of ADHD, and should: • provide diagnostic, treatment and consultation services for people with ADHD who have complex needs, or where general psychiatric services are in doubt about the diagnosis and/or management of ADHD • put in place systems of communication and protocols for information sharing among paediatric, child and adolescent, forensic, and adult mental health services for people with ADHD, including arrangements for transition between child and adult	Updated to clarify services.

services • produce local protocols for shared care arrangements with primary care providers, and ensure that clear lines of communication between primary and secondary care are maintained • ensure age-appropriate psychological services are available for children, young people and adults with ADHD, and for parents or carers. The size and time commitment of these teams should depend on local circumstances (for example, the size of the trust, the population covered and the estimated referral rate for people with ADHD). (1.1.1.2)	services • produce local protocols for shared care arrangements with primary care providers, and ensure that clear lines of communication between primary and secondary care are maintained • ensure age-appropriate psychological services are available for children, young people and adults with ADHD, and for parents or carers. The size and time commitment of these teams should depend on local circumstances (for example, the size of the trust, the population covered and the estimated referral rate for people with ADHD). (1.1.2)	

Every locality should develop a multi-agency group, with representatives from multidisciplinary specialist ADHD teams, paediatrics, mental health and learning disability trusts, forensic services, child and adolescent mental health services (CAMHS), the Children and Young People's Directorate (CYDP) (including services for education and social services), parent support groups and others with a significant local involvement in ADHD services. The group should: • oversee the implementation of this guideline • start and coordinate local training initiatives, including the provision of training and information for teachers about the characteristics of ADHD and its basic behavioural management • oversee the development and coordination of parent-training/education programmes • consider compiling a comprehensive directory of information and services for ADHD including advice on how to contact relevant services and assist in the development of specialist teams. (1.1.1.3)	Every locality should develop a multi-agency group, with representatives from multidisciplinary specialist ADHD teams, paediatrics, mental health and learning disability trusts, forensic services, child and adolescent mental health services (CAMHS), the Directorate for Children and Young People (DCYP) (including services for education and social services), parent support groups and others with a significant local involvement in ADHD services. The group should: • oversee the implementation of this guideline • start and coordinate local training initiatives, including the provision of training and information for teachers about the characteristics of ADHD and its basic behavioural management • oversee the development and coordination of parent-training/education programmes • consider compiling a comprehensive directory of information and services for ADHD including advice on how to contact relevant services and assist in the development of specialist teams. (1.1.3)	Updated with current name of Directorate for Children and Young People.
A young person with ADHD receiving treatment and care from CAMHS or paediatric services should be reassessed at school-leaving age to establish the need for continuing treatment into adulthood. If treatment is necessary, arrangements should be made for a smooth	A young person with ADHD receiving treatment and care from CAMHS or paediatric services should be reassessed at school-leaving age to establish the need for continuing treatment into adulthood. If treatment is necessary, arrangements should be made for a smooth	Updated with cross-reference to NICE's guideline on transition from children's to adult's services

transition to adult services with details of the anticipated treatment and services that the young person will require. Precise timing of arrangements may vary locally but should usually be completed by the time the young person is 18 years. (1.6.1.1)	transition to adult services with details of the anticipated treatment and services that the young person will require. Precise timing of arrangements may vary locally but should usually be completed by the time the young person is 18 years. See NICE's guideline on transition from children's to adults' services for young people using health or social care services. (1.1.4)	
The Department for Children, Schools and Families should consider providing more education to trainee teachers about ADHD by working with the Training and Development Agency for Schools (TDA) and relevant health service organisations to produce training programmes and guidance for supporting children with ADHD. (1.1.3.3)	The Department for Education should consider providing more education to trainee teachers about ADHD by working with the Teaching Agency (TA) and relevant health service organisations to produce training programmes and guidance for supporting children with ADHD. (1.1.9)	Updated to reflect changes in department and agency names
When a child or young person with disordered conduct and suspected ADHD is referred to a school's special educational needs coordinator (SENCO), the SENCO, in addition to helping the child with their behaviour, should inform the parents about local parent-training/education programmes. (1.2.1.2)	When a child or young person with disordered conduct and suspected ADHD is referred to a school's special educational needs coordinator (SENCO), the SENCO, in addition to helping the child with their behaviour, should inform the parents about local parent-training/education programmes. See NICE's guideline on antisocial behaviour and conduct disorders in children and young people. (1.2.4)	Updated with cross-reference to NICE's guideline on antisocial behaviour and conduct disorders in children and young people
If the child or young person's behavioural and/or attention problems suggestive of ADHD are having an adverse impact on their development or family life, consider: • a period of watchful waiting of up to 10 weeks • offering parents or carers a referral to a parent-	If the child or young person's behavioural and/or attention problems suggestive of ADHD are having an adverse impact on their development or family life, consider: • a period of watchful waiting of up to 10 weeks • offering parents or carers a referral to group-	Updated to clarify that the training should be group based and ADHD focused support

training/education programme (this should not wait for a formal diagnosis of ADHD). If the behavioural and/or attention problems persist with at least moderate impairment, the child or young person should be referred to secondary care (that is, a child psychiatrist, paediatrician, or specialist ADHD CAMHS) for assessment. (1.2.1.5)	based ADHD-focused support (this should not wait for a formal diagnosis of ADHD). If the behavioural and/or attention problems persist with at least moderate impairment, the child or young person should be referred to secondary care (that is, a child psychiatrist, paediatrician, or specialist ADHD CAMHS) for assessment. (1.2.7)	
For a diagnosis of ADHD, symptoms of hyperactivity/impulsivity and/or inattention should: • meet the diagnostic criteria in DSM-IV or ICD-10 (hyperkinetic disorder) , and • be associated with at least moderate psychological, social and/or educational or occupational impairment based on interview and/or direct observation in multiple settings, and • be pervasive, occurring in two or more important settings including social, familial, educational and/or occupational settings. As part of the diagnostic process, include an assessment of the person'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. (1.3.1.3)	For a diagnosis of ADHD, symptoms of hyperactivity/impulsivity and/or inattention should: • meet the diagnostic criteria in DSM-5 or ICD-10 (hyperkinetic disorder) , and • cause at least moderate psychological, social and/or educational or occupational impairment based on interview and/or direct observation in multiple settings, and • be pervasive, occurring in two or more important settings including social, familial, educational and/or occupational settings. As part of the diagnostic process, include an assessment of the person'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. (1.3.3)	Updated to reflect the most recent version of DSM

1

2 ISBN: