SHARED CARE GUIDELINE

Drugs: Methylphenidate, Lisdexamfetamine, Dexamfetamine, Atomoxetine

For Attention Deficit Hyperactivity Disorder in adults aged 18 years and over and in children and adolescents aged 6 to 17 years

Drug: Guanfacine - For Attention Deficit Hyperactivity Disorder in children and adolescents aged 6 to 17 years

Introduction

Indication

Attention Deficit Hyperactivity Disorder (ADHD) in adults aged 18 years and over and in children and adolescents aged 6 to 17 years.

The best interest, agreement and preferences of the patient should be at the centre of any shared care agreement and their wishes followed wherever possible. Patients should be able to decline shared care if, after due consideration of the options, they decide it is not in their best interests.

This shared care guideline is in accordance with NICE Guideline NG87[1] and the NHSE document 'Responsibility for prescribing between Primary & Secondary/Tertiary Care' (Jan 2018)[2] and relates to adult / adolescents / child patients after titration and dose stabilisation, whose condition is stable at hand over from secondary/tertiary to primary care. This may include adult patients who are stable on a secondary care-initiated combination of stimulant/non-stimulant medication for management of ADHD and have been in receipt of the stimulant/non-stimulant combination for at least three months.

When making arrangements for the prescribing of medicines for someone who may be at risk of self-harm or have the potential to misuse the medication, the arrangements should fit within the overall care plan for the individual service user.

Adults

Methylphenidate (with the exception of Medikinet XL modified release capsules, under special diagnostic considerations) and Dexamfetamine are not licensed for the treatment of adults with ADHD. Off-Label use in adults is endorsed by NICE Clinical Guideline 87.

Atomoxetine and Lisdexamfetamine are licensed for the treatment of ADHD in adult patients when pre-existing symptoms during childhood can be confirmed by a third-party.

Licensed doses in the Summary of Product Characteristics (SPC) for methylphenidate are based on licensed indication for children. It is recognised that higher doses are required in adults and the BNF references the following maximum doses for adults:

Methylphenidate immediate release	100mg per day
Concerta XL	108mg per day
Delmosart Prolonged Release	54mg per day
Equasym XL	100mg per day
Medikinet XL	100mg per day
Xaggitin XL	54mg per day

Where local formularies have approved Delmosart prolonged release or Xaggitin XL, it is proposed that doses of up to 108mg per day are approved for use in adults.

Children and adolescents

Methylphenidate and Atomoxetine are licensed for the treatment of ADHD in children of 6 years or over, as part of a comprehensive treatment programme.

Lisdexamfetamine and Dexamfetamine are indicated as part of a comprehensive treatment programme for attention deficit/hyperactivity disorder (ADHD) in children aged 6 years and over when response to previous methylphenidate treatment is considered clinically inadequate.

Guanfacine is licensed for the treatment of ADHD in children and adolescents 6-17 years old for whom stimulants are not suitable, not tolerated or have been shown to be ineffective.

This shared care guideline excludes:
Treatment of children under 6 years
Treatment of patients with ADHD in active treatment with drug and alcohol services
Treatment of patients with ADHD on the caseload of community mental health services for a psychotic illness or bipolar affective disorder

It is expected that excluded patients will be retained within specialist services

Please note:

The provision of shared care prescribing guidelines does not necessarily mean that the GP must agree to and accept clinical and legal responsibility for prescribing; they should only do so if they feel clinically confident in managing that condition.

Referral to the GP should only take place once the GP has agreed to this in each individual case, and the hospital or specialist will continue to provide prescriptions until a successful transfer of responsibilities has occurred. The GP should confirm the agreement and acceptance of the shared care prescribing arrangement and that supply arrangements have been finalised. The secondary/tertiary provider must supply an adequate amount of the medication to cover the transition period. The patient should then be informed to obtain further prescriptions from the GP.

Background

- ADHD is a heterogeneous behavioural syndrome characterised by the core symptoms of hyperactivity, impulsivity and inattention. While these symptoms tend to cluster together, some people are predominantly hyperactive and impulsive, while others are principally inattentive.
- Symptoms of ADHD are distributed throughout the population and vary in severity; only those with significant impairment meet criteria for a diagnosis of ADHD.
- Symptoms of ADHD can overlap with symptoms of other related disorders therefore care in differential diagnosis is needed.
- Diagnosis and initiation of treatment must be made by a specialist in the treatment of ADHD
- Drug treatment, in line with the agreed treatment algorithm (Appendix B), is the first-line treatment for adults with ADHD with either moderate or severe levels of impairment.
- Drug treatment, in line with the agreed treatment algorithm (Appendix C), is the first line treatment for children and adolescents with ADHD with either moderate or severe levels of impairment.
- Non-pharmacological treatment should be considered for adults with ADHD who have:

    1. made an informed choice not to have medication
    2. difficulty adhering to medication
    3. found medication to be ineffective or cannot tolerate it.

- Non-pharmacological treatment in combination with medication should be considered for patients with ADHD who have benefited from medication but whose symptoms are still causing a significant impairment in at least one domain.
- Non- pharmacological treatment may involve elements of or a full course of CBT.
- Stimulants used to treat ADHD work by increasing dopamine levels in the brain to improve focus and functioning
- There is the potential for drug misuse and diversion in adults with ADHD, especially in some settings, such as prison, although there is no strong evidence that this is a significant problem.
- Symptoms of ADHD become evident during childhood and patients are comprehensively assessed and diagnosed by specialists in the treatment of ADHD in children. For some young people with a sustained diagnosis, symptoms may persist into adulthood requiring treatment. This is addressed in NICE Guideline 87.

PLEASE NOTE: Brand names of preparations listed are examples **only**. This guideline does **not** endorse the use of any specific brand and local formularies should inform the choice of brand used.

Form (This list of preparations is not exhaustive, please refer to BNF / SPCs for full details)	**Methylphenidate**	**Lisdexamfetamine**	**Dexamfetamine**	**Atomoxetine**
	Tablets 5mg, 10mg, 20mg[3] Tablets M/R 18mg, 27mg, 36mg, 54mg (Concerta XL,[4] Delmosart [5] Xenidate XL[6]) Capsules M/R 10mg, 20mg, 30mg (Equasym XL [7]) Capsules M/R 5mg, 10mg, 20mg, 30mg, 40mg, 50mg, 60mg (Medikinet XL [8]) Tablets M/R 18mg, 27mg, 36mg, 54mg (Xaggitin XL [9])	Adult Hard Capsules 30mg, 50 mg and 70mg.[10](Elvanse Adult) Hard capsules 20mg[11], 30mg, 40mg, 50mg, 60mg, 70mg (Elvanse)	Tablets 5mg Tablets 5mg, 10mg, 20mg (Amfexa)[12]	Capsules 10mg, 18mg, 25mg, 40mg, 60mg, 80mg, 100mg 4mg/ml oral solution

Dose and administration (please refer to BNF / SPCs for full details)	**Methylphenidate** **Adults**: Refer to BNF and locally agreed guidelines for maximum doses for individual brands **MR preparations are not interchangeable. Prescribe by brand. For dosing see BNF / SPCs.** **Child 6–17 years:** For standard release formulation: Initially 5 mg 1–2 times daily, increased if necessary at weekly intervals by 5–10 mg daily; licensed max. 60 mg daily in 2–3 divided doses. Discontinue if no response after 1 month. Evening dose: If effect wears off in evening (with rebound hyperactivity) a dose at bedtime may be appropriate (establish need with trial bedtime dose) Note - Treatment may be started using a modified-release preparation. Dosing schedules for the individual preparations should be consulted. It is recommended that methylphenidate is de-challenged at least once yearly to assess the child's condition (preferable during school holidays).	**Lisdexamfetamine** (Elvanse Adult) **Adults**: Initially 30mg once daily, increased in steps of 20mg every week if required. Dose to be taken in the morning. Maximum dose 70mg daily. In patients with severe renal insufficiency (CrCl <30 mL/min) the maximum dose should not exceed 50 mg/day. Further dosage reduction should be considered in patients undergoing dialysis Discontinue if response insufficient after 1 month. **Child 6–17 years:** The starting dose is 30 mg taken once daily in the morning. When in the judgment of the clinician a lower initial dose is appropriate, patients may begin treatment with 20 mg once daily in the morning. The dose may be increased by 10 or 20 mg increments, at approximately weekly intervals. The maximum recommended dose is 70 mg/day. In patients with severe renal insufficiency (CrCl <30 mL/min) the maximum dose should not exceed 50 mg/day. Further dosage reduction should be considered in patients undergoing dialysis. Discontinue if response insufficient after 1 month	**Dexamfetamine** **Adults:** Initially 5mg twice daily, dose is increased at weekly intervals according to response, maintenance dose to be given in 2-4 divided doses. Maximum dose 60mg daily. **Child 6-17 years:** The recommended starting daily dose is 5 mg once or twice daily increasing if necessary by weekly increments of 5 mg in the daily dose. Normally the first increasing dose is given in the morning. The maximum daily dose in children and adolescent usually is 20 mg, although doses of 40 mg may in rare cases be necessary for optimum titration	**Atomoxetine** (Strattera) **Adults body weight ≤ 70kg**: 0.5mg /kg daily for 7 days, dose is increased according to response. Maintenance 1.2mg/kg daily. Total daily dose may be given as either a single dose in the morning or in 2 divided doses. Maximum 1.8mg/kg daily or 120mg / day. **Adults body weight ≥70kg**: Initially 40mg daily for 7 days, dose is increased according to response. Maintenance 80-100mg daily. Total daily dose may be given as either a single dose in the morning or in 2 divided doses. Maximum 120mg / day **Child 6-17 years body weight ≤ 70kg**: Atomoxetine should be initiated at a total daily dose of approximately 0.5mg/kg. The initial dose should be maintained for a minimum of 7 days prior to upward dose titration according to clinical response and tolerability. The recommended maintenance dose is approximately 1.2mg/kg/day. **Child 6-17 years body weight ≥ 70kg:** Atomoxetine should be initiated at a total daily dose of 40 mg. The initial dose should be maintained for a minimum of 7 days prior to upward dose titration according to clinical response and tolerability. The recommended maintenance dose is 80mg. The maximum recommended total daily dose is 100 mg.

Note: Methylphenidate, Lisdexamfetamine and Dexamfetamine are Schedule 2 Controlled Drugs. Appropriate controlled drugs prescription requirements should be followed.

Guanfacine (Children and Adolescents ONLY)

Form (please refer to BNF / SPCs for full details)

Guanfacine (Intuniv)

Prolonged Release Tablets 1mg, 2mg, 3mg ,4mg.

Dose and administration (please refer to BNF / SPCs for full details)

Adults: Not Applicable

Child 6-17 years:

The recommended starting dose is 1 mg, taken orally once a day. The dose may be adjusted in increments of not more than 1 mg per week. Dose should be individualised according to the patient's response and tolerability.

The recommended maintenance dose range is 0.05-0.12 mg/kg/day

The recommended dose titration for children and adolescents is provided below. Dose adjustments (increase or decrease) to a maximum tolerated dose within the recommended optimal weight-adjusted dose range based upon clinical judgement of response and tolerability may occur at any weekly interval after the initial dose.

Dose Titration Schedule for Children Aged 6-12 years

Weight Group	Week 1	Week 2	Week 3	Week 4
25kg and up Max dose = 4mg	1mg	2mg	3mg	4mg

Dose Titration Schedule for Adolescents Aged 13-17 Years

Weight Group [a]	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week7
34 – 41.4kg Max dose = 4mg	1mg	2mg	3mg	4mg			
41.4 – 49.4kg Max dose = 5mg	1mg	2mg	3mg	4mg	5mg		
49.5 – 58.4kg Max dose = 6mg	1mg	2mg	3mg	4mg	5mg	6mg	
58.5kg and above Max dose = 7mg	1mg	2mg	3mg	4mg	5mg	6mg	7mg[b]

a) Adolescent subjects must weigh at least 34 kg.

b) Adolescents weighing 58.5 kg and above may be titrated to a 7 mg/day dose after the subject has completed a minimum of 1 week of therapy on a 6 mg/day dose and the physician has performed a thorough review of the subject's tolerability and efficacy.

Patients/caregivers should be instructed not to discontinue guanfacine without consulting their physician.

When stopping Guanfacine, the dose must be tapered with decrements of no more than 1 mg every 3 to 7 days, and blood pressure and pulse should be monitored in order to minimise potential withdrawal effects, in particular increases in blood pressure and heart rate.

Common Adverse Effects (please refer to BNF / SPCs for full details)

Please refer to the SPC or BNF for full list.

Guanfacine, lisdexamfetamine, dexamfetamine and methylphenidate: patients and carers should be counselled about the effects on driving and performance of skilled tasks where applicable

Other side effects:

Methylphenidate and Dexamfetamine: Aggression (or hostility); alopecia; anxiety; appetite decreased; arrhythmias; arthralgia; asthenia; behaviour abnormal; cough; depression; diarrhoea; dizziness; drowsiness; dry mouth; feeling jittery; fever; gastrointestinal discomfort; growth retardation (in children); headaches; hyperhidrosis; hypertension; increased risk of infection; laryngeal pain; mood altered; movement disorders; muscle complaints; nausea; oropharyngeal

	pain; palpitations; paraesthesia; sexual dysfunction; skin reactions; sleep disorders; thirst; tic; toothache (in adults); vertigo; vision disorders; vomiting; weight decreased. Abdominal pain; poor weight gain. **Lisdexamfetamine:** Abdominal pain upper; anxiety; appetite decreased; behaviour abnormal; constipation; diarrhoea; dizziness; dry mouth; dyspnoea; fatigue; feeling jittery; headache; hyperhidrosis (uncommon in children); insomnia; mood altered; movement disorders (uncommon in children); nausea; palpitations; sexual dysfunction (uncommon in children); tachycardia; tremor; weight decreased. **Atomoxetine:** Anxiety; appetite decreased; arrhythmias (uncommon in children); asthenia; chills (in adults); constipation; depression; dizziness; drowsiness; dry mouth (in adults); feeling jittery (in adults); flatulence (in adults); gastrointestinal discomfort; genital pain (rare in children); headaches; hyperhidrosis (uncommon in children); menstrual cycle irregularities (in adults); mood altered; mydriasis (in children); nausea; palpitations (uncommon in children); prostatitis (in adults); sensation abnormal (uncommon in children); sexual dysfunction (rare in children); skin reactions; sleep disorders; taste altered (in adults); thirst (in adults); tremor (uncommon in children); urinary disorders (rare in children); vasodilation (in adults); vomiting; weight decreased. **Guanfacine:** Anxiety; appetite decreased; arrhythmias; asthenia; constipation; depression; diarrhoea; dizziness; drowsiness; dry mouth; gastrointestinal discomfort; headache; hypotension; mood altered; nausea; skin reactions; sleep disorders; urinary disorders; vomiting; weight increased. Somnolence and sedation may occur, predominantly during the first 2-3 weeks of treatment and with dose increases; manufacturer advises to consider dose reduction or discontinuation of treatment if symptoms are clinically significant or persistent.
Contraindications / Cautions (please refer to BNF / SPCs for full details)	**Methylphenidate: Contraindications:** Anorexia nervosa; arrhythmias; cardiomyopathy; cardiovascular disease; cerebrovascular disorders; heart failure; hyperthyroidism; mania; phaeochromocytoma; psychosis; severe depression; severe hypertension; structural cardiac abnormalities; suicidal tendencies; uncontrolled bipolar disorder; vasculitis. **Cautions:** Agitation; alcohol dependence; anxiety; drug dependence; epilepsy (discontinue if increased seizure frequency); family history of Tourette syndrome; susceptibility to angle-closure glaucoma; tics. **Dexamfetamine: Contraindications:** Advanced arteriosclerosis; anorexia; arrhythmias (life-threatening); cardiomyopathies; cardiovascular disease; cerebrovascular disorders; heart failure; history of alcohol abuse; history of drug abuse; hyperexcitability; hyperthyroidism; moderate hypertension; psychiatric disorders; psychosis; severe hypertension; structural cardiac abnormalities; suicidal tendencies. Manufacturer advises if new psychiatric symptoms develop or exacerbation of psychiatric disorders occurs, continue use only if benefits outweigh risks. **Cautions:** History of epilepsy (discontinue if seizures occur); mild hypertension; susceptibility to angle-closure glaucoma; tics; Tourette syndrome. Discontinue use if tics occur. Monitor height and weight as growth restriction may occur during prolonged therapy (drug-free periods may allow catch-up in growth but withdraw slowly to avoid inducing depression or renewed hyperactivity). **Lisdexamfetamine: Contraindications:** Advanced arteriosclerosis; agitated states; hyperthyroidism; moderate hypertension; severe hypertension; symptomatic cardiovascular disease. **Cautions:** Bipolar disorder; history of cardiovascular disease; history of substance abuse; may lower seizure threshold (discontinue if seizures occur); psychotic disorders; susceptibility to angle-closure glaucoma; tics; Tourette syndrome. Manufacturer advises caution in patients with underlying conditions that might be compromised by increases in blood pressure or heart rate. **Atomoxetine: Contraindications:** Phaeochromocytoma; severe cardiovascular disease; severe cerebrovascular disease. **Cautions:** Aggressive behaviour; cardiovascular disease; cerebrovascular disease; emotional lability; history of seizures; hostility; hypertension; mania; psychosis; QT-interval prolongation; structural cardiac abnormalities; susceptibility to angle-closure glaucoma; tachycardia. **Guanfacine**: **Contraindications:** Hypersensitivity to the active substance or to any of the excipients listed in the SPC. **Cautions:** Bradycardia (risk of torsade de pointes); heart block (risk of torsade de pointes); history of cardiovascular disease; history of QT-interval prolongation; hypokalaemia (risk of torsade de pointes).

Potentially Serious Drug Interactions (please refer to BNF / SPCs for full details)	**Methylphenidate:** • **Monoamine oxidase inhibitors (MAOI)** – risk of hypertensive crisis. Methylphenidate should not be used within a minimum of 2 weeks after discontinuing therapy with MAOI. Treatment with MAOI should not be initiated within 2 weeks after discontinuing methylphenidate. • **Coumarin anticoagulants, anticonvulsants (e.g. phenobarbital, phenytoin, primidone) and some antidepressants (tricyclics and selective serotonin reuptake inhibitors)** – increased effects due to inhibited metabolism. • **Anti-hypertensive drugs** - may decrease the effectiveness of active substances used to treat hypertension. • **Pressor agents or drugs that increase blood pressure** - enhanced effect • **Centrally acting alpha-2 agonists (e.g. clonidine)** - serious, adverse events, including sudden death, have been reported **Dexamfetamine / Lisdexamfetamine:** • **Monoamine oxidase inhibitors (MAOI)** – risk of hypertensive crisis. Amfetamines should not be used within a minimum of 2 weeks after discontinuing therapy with MAOI. Treatment with MAOI should not be initiated within 2 weeks after discontinuing amfetamines. • **Coumarin anticoagulants, anticonvulsants (e.g. phenobarbital, phenytoin, primidone) and some antidepressants (tricyclics and selective serotonin reuptake inhibitors)** – increased effects due to inhibited metabolism. • **Guanethidine** - antagonism of hypotensive effect • **Clonidine** - increased duration of action of amfetamines and inhibition of antihypertensive action **Atomoxetine:** • **Monoamine oxidase inhibitors (MAOI)** – risk of hypertensive crisis. Atomoxetine should not be used within a minimum of 2 weeks after discontinuing therapy with MAOI. Treatment with MAOI should not be initiated within 2 weeks after discontinuing atomoxetine. • **CYP2D6 inhibitors (SSRIs (e.g., fluoxetine, paroxetine), quinidine, terbinafine)** - atomoxetine exposure may be 6-to 8-fold increased and Css max 3 to 4 times higher • **Salbutamol (or other beta2 agonists)** - cardiovascular effects can be potentiated. • **Anti-hypertensive drugs** - atomoxetine may decrease the effectiveness of anti-hypertensive drugs • **Pressor agents or drugs that increase blood pressure** - enhanced effect **Guanfacine:** • **CYP3A4 inducers** (eg bosentan, carbamazepine, efavirenz, etravirine, modafinil, nevirapine, oxcarbazepine, phenobarbital, phenytoin, primidone, rifabutin, rifampicin, St John's Wort.) - Plasma concentration of guanfacine reduced. • **CYP3A4/5 inhibitors** (ketoconazole, boceprevir, clarithromycin, erythromycin, indinavir, itraconazole, posaconazole, ritonavir, saquinavir, telaprevir, telithromycin) - Plasma concentration of guanfacine increased • **Antihypertensive medicines** – risk of hypotension / syncope • **Valproic Acid** - can result in increased concentrations of valproic acid with potential additive central nervous system (CNS) effects

Secondary Care / Tertiary Care Responsibilities	

1) Conduct pre-treatment assessments in line with NICE NG87 namely:

- 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
- a full history and physical examination, 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)
  - a cardiovascular assessment
  - a baseline electrocardiogram (ECG) where ADHD medication is co-prescribed with other medication which has a significant risk of prolonging QTc interval e.g. tricylic antidepressants, monoamine oxidase inhibitors, antipsychotic medication, certain antihistamines or antiarrhythmics.
  - a baseline ECG in those with a personal history of cardiac conditions or family history of serious heart conditions
  - an ECG where clinical presentation is suggestive of cardiac disease
  - referral for cardiology opinion if certain conditions apply (as per NG87).

N.B: If the nominated secondary / tertiary care service(s) are unable to provide an ECG and primary care can facilitate this service, a payment can be claimed.

2) Have a structured discussion with people (and their families or carers as appropriate) about how ADHD could affect their life.

3) Inform people receiving a diagnosis of ADHD (and their families or carers as appropriate) about sources of information, including: local and national support groups and voluntary organisations, websites, support for education and employment. The information to be tailored to their individual needs and circumstances, including age, gender, educational level and life stage.

4) Ensure that people with ADHD have a comprehensive, holistic shared treatment plan that addresses psychological, behavioural and occupational or educational needs.

5) Record the person's preferences and concerns in their treatment plan. Patients should be able to decline shared care if, after due consideration of the options, they decide it is not in their best interests. Patients should provide explicit consent and this should be recorded in both the patients notes and on the shared care agreement form.

6) Initiate treatment in line with NICE NG 87

7) Provide information about the medication to patients, including common side effects, necessary monitoring, and where that monitoring will take place. Also, to keep the patient informed of the process at all stages to ensure continuity of treatment.

8) Titrate the dose against symptoms and adverse effects until dose optimisation is achieved, that is, reduced symptoms, positive behaviour change, improvements in education, employment and relationships, with tolerable adverse effects as outlined in NG 87.

9) Continue all necessary physical health monitoring during the titration period and to monitor effectiveness of medication for ADHD and adverse effects, and document in the person's notes.

10) Prescribe and monitor the patient until a stable treatment dose is reached (usually a period of three months).

11) Continue to provide prescriptions until a successful transfer of responsibilities to the GP has occurred. The secondary/tertiary provider must supply an adequate amount of the medication to cover the transition period and provide details of the diagnosis, prescribed medication regimen, baseline and most recent physical health results in writing to the GP. This information may be included in GP letters.

12) Ensure that patients 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.

Secondary Care / Tertiary Care Responsibilities (contd.)	13) Conduct an annual face to face or virtual medication review for all patients covered by this shared care guidance and consider discontinuation if the patient has been stable in the preceding year. Encourage people with ADHD to discuss any preferences to stop or change medication and to be involved in any decisions about stopping treatments. Inform GP of any decisions made, monitoring performed and results. 14) Contact the GP (in a timely manner) should a patient miss a specialist face to face or vitrual appointment to advise whether treatment should be withheld 15) Accept referrals back from primary care for medication discontinuation. 16) Resume prescribing and monitoring of the patient when a decision for managed withdrawal of treatment has been taken. 17) Continue to provide emergency appointments where patients are receiving prescriptions from their GP and they feel that a prompt assessment or review of their ADHD treatment is required, e.g. new or worsening seizures, development of psychotic symptoms, suicidal thinking and self-harm of an urgent nature with Atomoxetine or if diversion of medication is suspected with methylphenidate, dexamfetamine or lisdexamfetamine. 18) Provide prompt on-going advice to General Practitioners as required without necessarily requiring a new referral. 19) Provide advice to the GP as to the changes in parameters that should trigger urgent referral back to the specialist 20) Telephone details and (if appropriate) secure email addresses for both Secondary/Tertiary and Primary Care should be exchanged and recorded. This should include out-of-hours contact numbers. Patients and their carers should also be provided with contact details for support and help if required; both in and out of hours. 21) Ensure that adequate training and educational support is in place, where available, for the primary care multidisciplinary team (in collaboration with the local commissioner of the service pathway i.e. CCG). **In addition for children / adolescents** 22) Give information about ADHD and offer additional support to parents and carers of all children aged 5 years and over and young people with ADHD. The support should be ADHD focused, can be group based and as few as 1 or 2 sessions. It should include: • education and information on the causes and impact of ADHD • advise on parenting strategies • with consent, liaison with school, college or university (see recommendation 1.4.12) • both parents and carers if feasible 23) If a child aged 5 years or over or young person has ADHD and symptoms of oppositional defiant disorder or conduct disorder, offer parents and carers a parent-training programme in line with recommendations, as well as group-based ADHD-focused support. 24) Medication for children aged 5 years and over and young people should only be offered if: • their ADHD symptoms are still causing a persistent significant impairment in at least one domain after environmental modifications have been implemented and reviewed • they and their parents and carers have discussed information about ADHD • a baseline assessment has been carried out 25) 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.

Primary Care Responsibilities

Primary Care Responsibilities	**Clinical responsibility for prescribing is held by the person signing the prescription, who must also ensure adequate monitoring.** 1) To consider requests to prescribe under shared care arrangements and highlight any concerns about the requests to secondary care services within 28 days of the date on the letter. 2) To provide continuation prescriptions or identify any concerns about the request to the prescriber in the specialist team. It is expected that primary care prescribers will not make changes to the dose/formulation, unless it is in consultation with the specialist team. Secondary care services will continue to undertake an annual review of the patient 3) To monitor the patient in accordance with Appendix A and contact the specialist team if results give rise to concern. Any ongoing monitoring requirements for individual patients discharged from secondary/tertiary care will be identified by the specialist service as part of the discharge information to the GP. 4) To contact specialists within the team where concerns arise about a patient's presentation or when advice is needed, e.g. new or worsening seizures, development of psychotic symptoms, suicidal thinking and self-harm of an urgent nature with atomoxetine or if diversion of medication is suspected with methylphenidate, dexamfetamine or lisdexamfetamine. 5) To refer back to secondary/tertiary care if withdrawal of treatment might be indicated. This could be because: • The patient is well controlled and has been free of ADHD symptoms for at least one year whilst taking medication • ADHD symptoms are not evident on days when medication is forgotten or missed • There is evidence of misuse or diversion of ADHD medication • There has been no need to increase the dose of medication in child or adolescent patients despite growth and weight gain over the preceding one to two years **Circumstances for discontinuation of treatment in Primary Care** 1) As a joint decision with specialist team providing specific advice in case of adverse effect pending assessment. *2)* Where specialist services advise that failure to engage in the annual review process is such that treatment should be discontinued

APPENDIX A

Monitoring Requirements for GPs under ADHD shared care agreement

Baseline/initial monitoring until the patient is on a stable dose will be carried out by secondary care provider. Monitor effectiveness of medication and adverse effects, document in the person's notes.

Blood pressure, weight, and height monitoring in children and adolescents should be plotted on appropriate centile charts.

Monitoring Required	Methylphenidate	Dexamfetamine	Lisdexamfetamine	Atomoxetine	Guanfacine (6-17 years only)
Cardiac function and blood pressure Ensure heart rate / pulse and blood pressure are monitored at each dose adjustment and at least every 6 months (3months for guanfacine) (Sustained resting tachycardia (>120bpm), arrhythmia or systolic blood pressure greater than the 95th percentile (or a clinically significant increase) should prompt referral to the secondary care provider) An ECG is only required at ba**seline if there is a clinical indication e.g. personal history of significant family history of cardiac disease, co-prescribed medication which may significantly lengthen QTc interval, clinical presentation suggestive of cardiac concerns**	✓	✓	✓	✓	✓ (EVERY 3 MONTHS) Signs of bradycardia and hypotension should prompt referral to the specialist service for those receiving guanfacine
Weight, Height and Appetite * **Adult** - Ensure **weight** is monitored at each dose adjustment and at least every 6 months **Children** and young people - measure **height** every 6 months in children and young people, measure **weight** every 3 months in children 10 years and under and measure **weight** at 3 and 6 months after starting treatment in children over 10 years and young people, and every 6 months thereafter, or more often if concerns arise. For **Guanfacine** - **BMI** should be done every 3 months for the first year and then 6 monthly thereafter.	✓	✓	✓	✓	✓
New or worsening psychiatric symptoms Monitor at each dose adjustment and at least every 6 months	✓	✓	✓	✓	✓
Onset or exacerbation of motor and verbal tics** Monitor at each dose adjustment and at least every 6 months	✓	✓	✓	✓	N/A
Somnolence / Sedation	N/A	N/A	N/A	N/A	✓ (EVERY 3 MONTHS)
Sexual Dysfunction	N/A	N/A	N/A	✓	N/A
Sleep Pattern (e.g. sleep diary)	✓	✓	✓	✓	✓

* Strategies to reduce weight loss, include:

- Taking medication either with or after food, rather than before meals
- Eating additional meals or snacks early morning or late evening when stimulant effects have worn off
- Obtaining dietary advice and eating high-calorie foods of good nutritional value.

** 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, clonidine (clonidine does not have a UK marketing authorisation for this indication), or stopping medication.

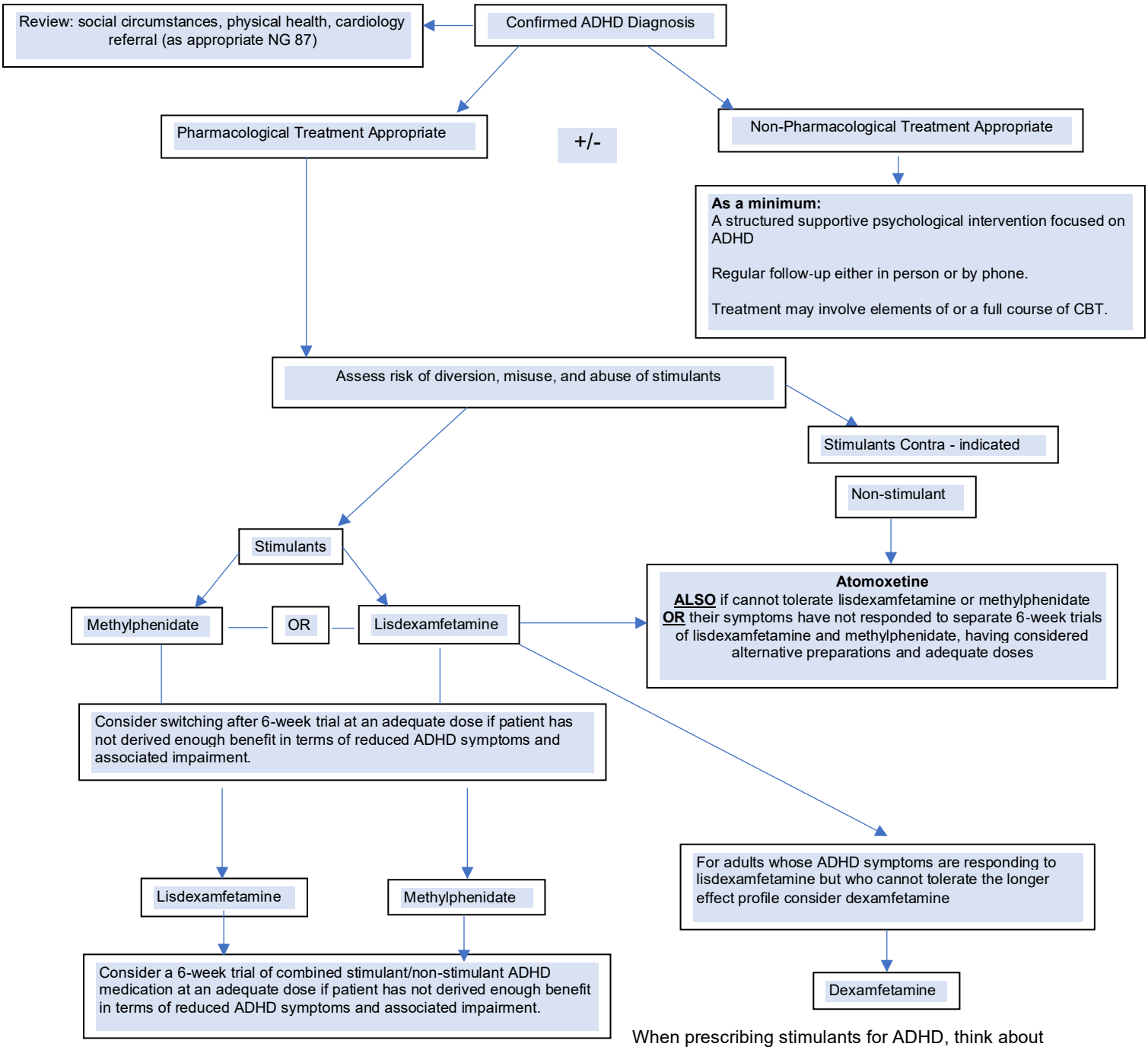
Monitoring Required Only In Response To Symptoms	Methylphenidate	Dexamfetamine	Lisdexamfetamine	Atomoxetine	Guanfacine (6-17 years only)
Blood tests for liver function If abdominal pain, unexplained nausea, jaundice, darkened urine or malaise. • If an adverse effect is suspected the secondary care provider should be contacted for advice and an urgent assessment • GP to copy in specialist to any blood tests undertaken	N/A	N/A	N/A	✓	✓
Cardiac evaluation If develop symptoms such as exertional chest pain, unexplained syncope, or other symptoms suggestive of cardiac disease during treatment.	✓	✓	✓	✓	✓
BMI If there has been a weight change as a result of their treatment	✓	✓	✓	✓	As above
New or worsening seizures GP to contact specialist immediately for review of treatment. Stop ADHD medication; suspend shared care until reviewed by specialist team	✓	✓	✓	✓	N/A

Patients should be monitored for the risk of diversion, misuse, and abuse of methylphenidate, dexamfetamine and lisdexamfetamine.

Annual face to face or virtual medication review by the secondary care provider

Medication Review	Methylphenidate	Dexamfetamine	Lisdexamfetamine	Atomoxetine	Guanfacine (6-17 years only)
An annual medication review to assess the patient for ongoing treatment. Carried out by the secondary care provider and to also include all physical monitoring.	✓	✓	✓	✓	✓

APPENDIX B Pharmacological Treatment Algorithm - ADHD in Adults (NG 87)



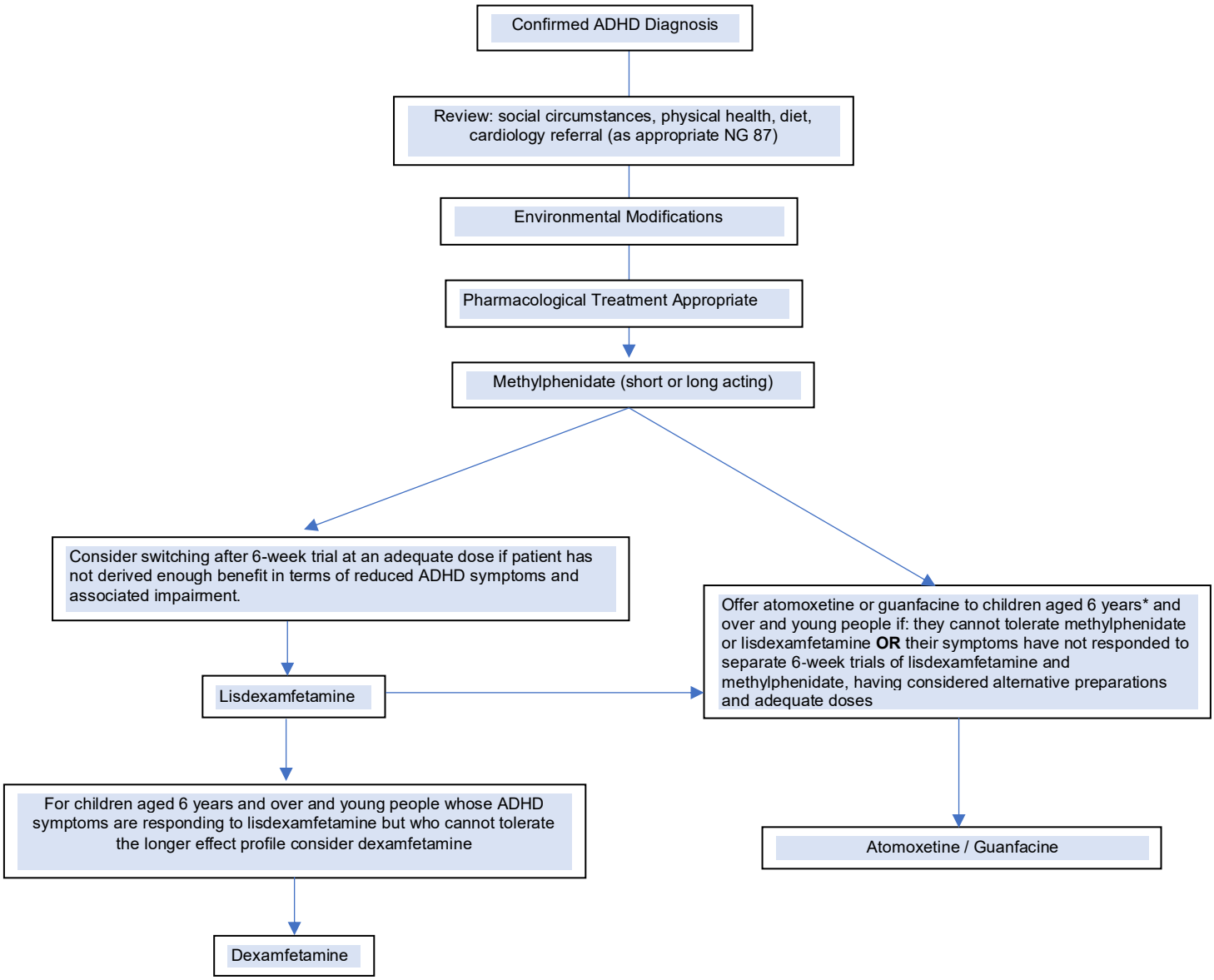
When prescribing stimulants for ADHD, think about modified-release once-daily preparations for the following reasons:

- Convenience
- improving adherence
- reducing stigma (because there is no need to take medication at school or in the workplace)
- 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

APPENDIX C

Pharmacological Treatment Algorithm - ADHD in Children aged 6 -17 years (NG 87)



*NICE NG87 includes treatment for children of 5 years of age (these children are excluded from this LMMG shared care guideline). As of May 2018 atomoxetine or guanfacine did not have a UK marketing authorisation for this indication in children aged 5 years.

References

[1] **Attention deficit hyperactivity disorder: diagnosis and management NICE guideline [NG87] Published date: March 2018 https://www.nice.org.uk/guidance/ng87 - last updated September 2019 – last accessed 24/02/2026**

[2] **Responsibility for prescribing between Primary & Secondary/Tertiary Care NHSE Jan 2018 https://www.england.nhs.uk/wp-content/uploads/2018/03/responsibility-prescribing-between-primary-secondary-care-v2.pdf - last accessed 24/02/2026**

[3] **SPC Methylphenidate Hydrochloride 5 mg Tablets https://www.medicines.org.uk/emc/product/8724/smpc - last accessed 24/02/2026**

[4]**SPC Concerta XL 18 mg prolonged-release tablets https://www.medicines.org.uk/emc/product/6872/smpc - last accessed 24/02/2026**

[5] **SPC Delmosart 18mg Prolonged-release Tablets** https://mhraproducts4853.blob.core.windows.net/docs/798d978dac1d1ccdf855487e075b07085c4748ff **- last accessed 24/02/2026**

[6] **SPC Xenidate XL 18 mg Prolonged-release Tablets** https://www.medicines.org.uk/emc/product/4397/smpc **- last accessed 24/02/2026**

[7] **SPC Equasym XL 10 mg Capsules https://www.medicines.org.uk/emc/product/3887/smpc - last accessed 24/02/2026**

[8]**SPC Medikinet XL 10 mg modified-release capsules, hard https://www.medicines.org.uk/emc/product/313/smpc - last accessed 24/02/2026**

[9] **SPC Xaggitin XL Combined https://www.medicines.org.uk/emc/product/2704/smpc - last accessed 24/02/2026**

[10] **SPC Elvanse Adult 30mg Capsules, hard https://www.medicines.org.uk/emc/product/6828/smpc - last accessed 24/02/2026**

[11] **SPC Elvanse 20mg Capsules, hard https://www.medicines.org.uk/emc/product/14091/smpc/history - last accessed 24/02/2026**

[12]**SPC Amfexa 10mg Tablets https://www.medicines.org.uk/emc/product/7403/smpc - last accessed 24/02/2026**

[13] **SPC Strattera 10mg hard capsules https://www.medicines.org.uk/emc/product/5531/smpc - last accessed 24/02/2026**

[14] **British National Formulary (BNF) – February 2026**

[15]**SPC Intuniv 1 mg prolonged-release tablets https://www.medicines.org.uk/emc/product/5099/smpc - last accessed 24/02/2026**

Version Number	Date	Amendments Made	Author
Version 1.0 (combined adult and children)	October 2018	New combined guideline.	SA/AG
Version 1.1	September 2019	Minor update in line with SPC and NICE	SR (LCFT)/AG
Version 1.2	March 2023	No changes required.	AGR
Version 1.3	September 2025	Provision for virtual reviews added.	AGR
Version 1.4	March 2026	Updated in line with SPCs, significant updates to side effects and contraindications/cautions.	AGR