Shared Care Protocol

For Attention Deficit Hyperactivity Disorder (ADHD) medication:

Methylphenidate
Lisdexamfetamine
Dexamfetamine
Atomoxetine
Guanfacine

This shared care protocol (SCP) sets out details for the sharing of care for patients prescribed ***methylphenidate, lisdexamfetamine, dexamfetamine, atomoxetine or guanfacine*** *in the management of ADHD.*

It should be read in conjunction with the latest Summary of Products Characteristics (SmPC) available at http://www.medicines.org.uk/emc/

As outlined in NHS England Guidance 2018 (07573), 'Responsibility for Prescribing Between Primary & Secondary/Tertiary Care': When a specialist considers a patient's condition to be stable or predictable, they may seek the agreement of the GP concerned (and the patient) to share their care.

This document provides information on drug treatment for the shared commitment between the specialist and GP concerned. GPs are invited to participate. If the GP is not confident to undertake these roles, then they are under no obligation to do so. In such an event, the total clinical responsibility for the patient for the diagnosed condition remains with the specialist. The doctor who prescribes the medication has the clinical responsibility for the drug and the consequences of its use.

N.B. If the GP decides not to participate in shared care for a particular patient, they must inform the relevant specialist in writing, within 2 weeks of receipt of a request to share care.

For further information please click on the links below or visit:

- See the Neurodivergence - NHS Somerset ICB page for information and updates.
- https://bnf.nice.org.uk/
- http://www.medicines.org.uk/emc/
- NICE NG87: Attention deficit hyperactivity disorder: diagnosis and management. Last updated September 2019 https://www.nice.org.uk/guidance/ng87/
- Prescribing available medicines to treat ADHD – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice (includes stock availability information)

Introduction

- NICE (NG87) recommends that people with ADHD have a comprehensive, holistic shared treatment plan that addresses psychological, behavioural and occupational or educational needs.

- This shared care protocol applies to **children over 6 years, young people and adults*** initiated and stabilised on any of the drugs covered by this shared care protocol by a specialist experienced in the treatment of ADHD as part of a comprehensive treatment programme (**adults diagnosed with ADHD in childhood or adulthood).*

- This shared care protocol applies only to patients prescribed the **ADHD medication covered by this shared care protocol, as recommended by NICE and within licensed doses**. It does not apply to patients prescribed non-NICE recommended combinations or unlicensed doses.

- Prescribing responsibility for non-NICE combinations or non-formulary unlicensed doses remains with the initiating specialist.

- **Off label use:** Some ADHD medicines and brands are not licensed in children or adults but their use is indicated in this shared care protocol as per NICE.

Medication choice:

Prescribe cost-effective brands first. See formulary for preparations & costs

1st line: Methylphenidate** (stimulant) - either short or long-acting preparation.

2nd line: Lisdexamfetamine (stimulant) or **Dexamfetamine** (stimulant)

3rd line: Atomoxetine (non-stimulant)

4th line: Guanfacine (non-stimulant) - do not offer to adults without advice from a tertiary ADHD service (off label use)

** NICE states lisdexamfetamine may also be offered as first-line pharmacological treatment for adults with ADHD (off-label use of lisdexamfetamine for adults with no diagnosis of ADHD in childhood)*

Dose (posology & method of administration):
For full details see individual SmPCs at http://www.medicines.org.uk/emc/ and BNF www.bnf.org.uk

Contra-indications:
For full details see individual SmPCs at http://www.medicines.org.uk/emc/ and BNF www.bnf.org.uk

Special warnings and precautions:
For full details see individual SmPCs at http://www.medicines.org.uk/emc/ and BNF www.bnf.org.uk

Drug interactions:
For full details see individual SmPCs at http://www.medicines.org.uk/emc/ and BNF www.bnf.org.uk

Adverse effects & management:
For full details see individual SmPCs at http://www.medicines.org.uk/emc/ and BNF www.bnf.org.uk

See **Table 3: 'Adverse effects and other management'** for the management of adverse effects and test results by primary care.

Any serious adverse reactions should be reported to the MHRA via the Yellow Card scheme www.mhra.gov.uk/yellowcard

Methylphenidate

SmPC's and Risk Minimisation materials available at:
https://www.medicines.org.uk/emc/search?q=%22Methylphenidate%22

Methylphenidate: safe and effective use to treat ADHD - GOV.UK (www.gov.uk)
Published 11 December 2014

Methylphenidate: new patient information - GOV.UK (www.gov.uk) Published 11 December 2014

Methylphenidate long-acting (modified-release) preparations: caution if switching between products due to differences in formulations - GOV.UK (www.gov.uk)
Published 26 September 2022

- The maximum licensed daily dose varies with formulation and brand; consult BNF and SmPC.
- Adults with ADHD who have shown clear benefit from methylphenidate in childhood or adolescence may continue treatment into adulthood at the same daily dose. Consult SmPC for the prescribed brand for more information.
- Initiation of methylphenidate in adults is usually off-label but is recommended by NICE (see SmPC for brand-specific licensing information).
- See formulary for cost effective preferred brands and formulation information.
- NICE states: *Think about using 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.*

Consideration should be taken of the combined total dose of methylphenidate and maximum licenced dose in this situation.

Stopping treatment:

- If temporarily or permanently stopping methylphenidate, it is possible to stop without tapering, but monitor for withdrawal symptoms.
- On specialist advice, temporary treatment breaks (for example, at the weekend or during school holidays) can be considered for those stable on treatment. This may be beneficial if there are concerns regarding growth, appetite or insomnia.

Lisdexamfetamine

SmPC's and Risk Minimisation materials available at:
https://www.medicines.org.uk/emc/search?q=lisdexamfetamine

- In the event of a missed dose, dosing can resume the next day. Afternoon doses should be avoided because of the potential for insomnia due to long duration of action (13-14 hours).

Stopping treatment:

- Due to the risks of severe depression, and fatigue, abrupt withdrawal after a prolonged period of intake of high doses of lisdexamfetamine should be avoided. Patients wishing to reduce their dose or stop lisdexamfetamine treatment should discuss with their specialist before doing so.
- Treatment holidays should be planned with their specialist.

Dexamfetamine

SmPC's and Risk Minimisation materials available at:
https://www.medicines.org.uk/emc/search?q=dexamfetamine

- Dexamfetamine should not be taken too late after lunch time to avoid disturbances of sleep

Stopping treatment:

- Due to the risks of severe depression, and fatigue, abrupt withdrawal after a prolonged period of intake of high doses of dexamfetamine should be avoided. Patients wishing to reduce their dose or stop dexamfetamine treatment should discuss with their specialist before doing so.
- Treatment holidays should be planned with their specialist.

Atomoxetine

SmPC's available at: https://www.medicines.org.uk/emc/search?q=atomoxetine

Atomoxetine (Strattera▼): increases in blood pressure and heart rate - GOV.UK (www.gov.uk) Published 11 December 2014

Atomoxetine: risk of psychotic or manic symptoms in children and adolescents - GOV.UK (www.gov.uk) Published 11 December 2014

- Monitor young people and adults with ADHD for sexual dysfunction (that is, erectile and ejaculatory dysfunction) as potential adverse effects of atomoxetine.

Stopping treatment:

- No distinct withdrawal symptoms have been described. In cases of significant adverse effects, atomoxetine may be stopped abruptly; otherwise the medicinal product may be tapered off over a suitable time period.

Guanfacine

Intuniv 1 mg prolonged-release tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk)
Intuniv 1 mg prolonged-release tablets - Risk Management Materials - (emc) (medicines.org.uk)

- Guanfacine should not be prescribed in children with body weight <25kg
- Adolescent subjects (13-17 years) must weigh at least 34kg.
- Adults who have shown clear benefit from guanfacine in childhood or adolescence may continue treatment into adulthood at the same daily dose (off-label).
- During dose titration, weekly monitoring for signs and symptoms of somnolence and sedation, hypotension and bradycardia should be performed.
- Guanfacine can cause syncope, hypotension and bradycardia. Syncope may involve risks of falls or accidents, which could result in serious harm.
- Dehydration can increase the risk of falls or fainting – patient should drink plenty of fluids
- Avoid grapefruit juice while taking guanfacine. See BNF or SmPC for all enzyme inhibitor/inducer interactions, and also other interactions.
- Guanfacine can be administered with or without food but should not be administered with high fat meals, due to increased exposure.
- Guanfacine may be taken in the morning or evening.
- Guanfacine may cause somnolence and sedation predominantly at the start of treatment and could typically last for 2-3 weeks and longer in some cases.

Stopping treatment:

- Abrupt withdrawal should be avoided because serious withdrawal effects can occur.
- Any drug holidays should have a gradual reduction not immediate cessation.
- Due to risk of blood pressure increase upon discontinuation, guanfacine should be gradually tapered at a rate of no more than 1 mg every 3 to 7 days. Blood pressure and pulse should be monitored when discontinuing treatment.
- If two or more consecutive doses are missed, re-titration is recommended, a lower starting dose may be required based on the patient's tolerance to guanfacine.

This information is not exhaustive. The manufacturer's summary of product characteristics (SmPC) and the most current edition of the British National Formulary should be consulted for full information on contra-indications, warnings, side-effects and drug interactions.

ADHD Medication and Pregnancy:

Patients of childbearing potential should use appropriate contraception. See Medicines in pregnancy, children and lactation - NHS Somerset ICB for information on family planning.

Patients who become pregnant, or who are planning a pregnancy, should be referred to the specialist team for review of their treatment options.

Information for healthcare professionals:

- UKTIS – Evidence-based safety information about medication, vaccine, chemical and radiological exposures in pregnancy

Information for patients:

- bumps - best use of medicine in pregnancy (medicinesinpregnancy.org)
- Somerset NHS FT Choice & Medication leaflet - A guide to help you choose between the medicines to help the symptoms of ADHD in pregnancy and breastfeeding

ADHD Medication & Breastfeeding:

During breastfeeding, methylphenidate is the preferred drug for ADHD, although the evidence for safety is limited.

Infants should be monitored for symptoms of CNS stimulation, although these may be difficult to detect. High doses may interfere with lactation, particularly if full supply is not well established (i.e. in the first 4-6 weeks postnatally), although this is not confirmed in practice.

A pragmatic approach should be taken, considering the wellbeing of the breastfeeding parent, their mental health and the executive functioning pressures of not breastfeeding.

Information for healthcare professionals:

- Safety in Lactation: Drugs for ADHD – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice
- Drugs and Lactation Database (LactMed®) - NCBI Bookshelf (nih.gov) for individual drug entries.
- Medicines in pregnancy, children and lactation - NHS Somerset ICB for information on considerations particularly when prescribing in lactation.

Information for patients:

- Somerset NHS FT Choice & Medication leaflet - A guide to help you choose between the medicines to help the symptoms of ADHD in pregnancy and breastfeeding

ADHD Medication & Paternal exposure:

Methylphenidate, Atomoxetine, Dexamfetamine, Lisdexamfetamine & Guanfacine - No evidence regarding adverse outcomes identified.
Further information for patients: bumps - medicinesinpregnancy.org

Shared Care Responsibilities

Specialist responsibilities:

- Assess the patient and provide diagnosis. Communicate to the GP.
- When medications are indicated discuss the potential benefits and adverse effects of pharmacological and non-pharmacological treatments.
- Use a shared decision-making approach; discuss the benefits and risks of the treatment with the patient and/or their carer and provide the appropriate counselling to enable the patient to reach an informed decision, including information on side-effects and when to seek urgent medical attention (see also '**Advice to Patients & Carers**').
- Provide an appropriate patient information leaflet on the individual medicine and resources as relevant, for example:
  - Somerset NHS FT Choice & Medication leaflets https://www.choiceandmedication.org/somerset/printable-leaflets/
  - Royal College of Psychiatrists – ADHD in adults. https://www.rcpsych.ac.uk/mental-health/problems-disorders/adhd-in-adults
  - NHS – Attention deficit hyperactivity disorder. https://www.nhs.uk/conditions/attention-deficit-hyperactivity-disorder-adhd/
- Obtain and document consent. Discuss any off-label use of the medication as part of the consent process.
- Ensure the patient and/or their carer understands that treatment may be stopped if they do not attend for monitoring and treatment review
- Assess the patient for contraindications, cautions, interactions, and the need for contraception as appropriate.
- Conduct required baseline investigations, initial and ongoing monitoring. See **Table 1: Baseline investigations, initial monitoring and ongoing monitoring to be undertaken by specialist**
- Ensure patient/carer has a basic understanding of what the drug is, how and when it should be taken, why it is being used, and an awareness of potential side effects, including when to seek medical attention (see also '**Advice to patients and carers').**
- Initiate and optimise treatment. Prescribe by brand to avoid confusion between differing products and formulation profiles.
- Prescribe in line with controlled drug prescription requirements.

- Assessment of symptom improvement. Discontinue if no improvement is observed after one month.
- After at least 6 weeks, and when the patient's dose has been optimised and with satisfactory observations for at least 4 weeks, a request can be made to the patient's GP to 'share' the patient's care.
- Communicate to patient's GP practice detailing the diagnosis, medication brand to be prescribed, current and ongoing dose, any relevant test results and when the next monitoring is required. Include specialist service contact information.
- Prescribe sufficient medication to enable transfer to primary care, including where there are unforeseen delays to transfer of care.
- Provide patients/carers/parents/teachers with comprehensive advice and information, covering symptoms of ADHD, social impact, treatment approaches, and guidance on storage and administration of medication.
- Consider referral of patient / family to other support agencies.
- Conduct the required monitoring and communicate the results to primary care.
- Review outcomes should be communicated to the primary care prescriber in writing, with any urgent changes also communicated by telephone.
- Determine the duration of treatment and frequency of review. After each review, advise primary care whether treatment should be continued, confirm the ongoing dose, and whether the ongoing monitoring remains appropriate. Trial discontinuations should be managed by the specialist.
- Reassume prescribing responsibilities if a patient becomes or wishes to become pregnant.
- Provide advice to primary care on the management of adverse effects if required.
- The duration of treatment & frequency of review will be determined by the specialist, based on clinical response and tolerability.
- The specialist to provide a drug holiday plan for patients, if appropriate, for example, children having school holiday breaks and any patient on guanfacine.
- All dose or formulation adjustments will be the responsibility of the initiating specialist unless directions have been discussed and agreed with the primary care clinician.
- Termination of treatment will be the responsibility of the specialist.
- All patients will remain under the ongoing care of a named specialist.
- The specialist will provide support if problems occur and will provide relevant contact details for their service.

Table 1: Baseline investigations, initial monitoring and ongoing monitoring to be undertaken by specialist

Baseline investigations

- A full assessment, as recommended by NICE guidance for ADHD. This should include a medical history and cardiovascular assessment, taking into account conditions that may be contraindications for medication, risk of pregnancy (where applicable) and to ensure the patient meets the criteria for ADHD and that pharmacological treatment is required
- Risk assessment for substance misuse and drug diversion
- Height, weight, and body mass index (BMI)
- Appetite
- Blood pressure (BP) and heart rate
- Electrocardiogram (ECG) and cardiology opinion if the patient has any of the following:
    - history of congenital heart disease or previous cardiac surgery
    - sudden death in a first-degree relative under 40 years suggesting a cardiac disease
    - shortness of breath on exertion compared with peers
    - fainting on exertion or in response to fright or noise
    - palpitations
    - chest pain suggestive of cardiac origin
    - signs of heart failure, heart murmur or hypertension
    - current treatment with a medicine that may increase cardiac risk
    - blood pressure that is classified as hypertensive for adults
- Refer to a paediatric hypertension specialist before starting medication for ADHD if blood pressure is consistently above the 95th centile for age and height for children and young people

Initial monitoring

Before every dose change	• Heart rate • Blood pressure
After every dose change	• Heart rate • Blood pressure • Assess for cardiovascular symptoms • Assess for new/worsening psychiatric or neurological symptoms (e.g. tics, movement disorders) • Monitor for suicidal ideation or behaviour The specialist should determine the appropriate timing for this monitoring.

Table 1: Baseline investigations, initial monitoring and ongoing monitoring to be undertaken by specialist (continued)

- Monitor for aggressive behaviour or hostility.
- With **guanfacine - weekly monitoring** for signs and symptoms of somnolence, sedation, hypotension and bradycardia during dose titration and stabilisation, then ongoing monitoring during any dose adjustments or discontinuation.
- If weight loss is a clinical concern, consider monitoring and management strategies which could include treatment breaks and consider changing medication if weight change persists.
- Assessment of symptom improvement. Discontinue if no improvement is observed after one month.

Ongoing monitoring	Frequency
• Height	Children & young people: Every 6 months
• Weight & appetite	**If <10 years:** Every 3 months **If >10 years:** At 3 and 6 months after starting treatment, then every 6 months thereafter, or more often if concerns arise **Adults:** Every 6 months **Guanfacine – for all patients, every 3 months for the first year, and every 6 months thereafter.** Plot height and weight of children and young people on a growth chart and ensure review by the healthcare professional responsible for treatment. For growth charts visit UK-WHO growth charts - 2-18 years | RCPCH
• Blood pressure, heart rate and assessment for cardiovascular signs and symptoms. • Assessment for new or worsening psychiatric and neurological signs or symptoms • Sleep difficulties • Somnolence and sedation • Suicidal ideation or behaviour	Every 6 months**, and before and after any change of dose. ****Guanfacine - every 3 months for the first year, and every 6 months thereafter**. Compare BP with the normal range for age. ○ Resting HR 120bpm or greater, arrhythmia/palpitations, or systolic BP greater than the 95th percentile (or a clinically significant increase) measured on 2 occasions - reduce their dose and refer them to a paediatric hypertension specialist or adult physician as appropriate. ○ Guanfacine - If a person has sustained orthostatic hypotension or fainting episodes, reduce their dose or switch to another ADHD medication.

Table 1: Baseline investigations, initial monitoring and ongoing monitoring to be undertaken by specialist (continued)	
• Assessment of adherence, and for any indication of ADHD medication abuse, misuse, or diversion	As required, based on the patient's needs and individual circumstances including if concerns with frequency of repeat prescription requests
• Review with a healthcare professional with expertise in ADHD	Children & young people – 6 monthly Adults – annually To include: • a review of ADHD medication, including patient preferences, benefits, adverse effects, and ongoing clinical need. • 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. If continuing medication, document the reasons why.

General Practitioner responsibilities:

- Prior to accepting a request by the specialist for 'shared care', ensure that all baseline investigations and initial monitoring has been carried out and that the prescribed ADHD medication fits the criteria for this shared care protocol (see 'Introduction')
- Accept request to take on prescribing of the ADHD medication once the specialist considers a patient's condition is stable and the patient is stabilised on a tolerated dose effective for symptom control, no sooner than 6 weeks after initiation.
- Reinforce educational points provided by the specialist including what the drug is, why it has been prescribed, how it should be taken, potential side-effects, when to seek medical attention (see also '**Advice to patients & carers'**).
- Repeat prescribing of ADHD medication no sooner than 6 weeks after initiation.
- Prescribe in line with controlled drug prescription requirements
- Conduct the required monitoring. Communicate any abnormal results to the specialist. See **Table 2: General Practitioner Monitoring Responsibilities**
- Refer back to the specialist (urgently) should any of the following occur; failure to thrive/retardation of growth, persistent sleep disturbance, persistent problems with poor attention, pronounced change in mental state.
- Manage any adverse effects as detailed in **Table 3: Adverse effects & other management**
- Assess for possible interactions with ADHD medication when starting new medicines.
- Inform the specialist of any changes in the patient's medical condition and/or prescribed medication, especially adverse effects.
- Adjust the dose of medications prescribed as advised by the specialist.
- Ensure the patient is given the appropriate appointments for monitoring.
- Ensure patient has been offered and attended a 6 monthly review (children) or annual review (adults) with a healthcare professional with expertise in ADHD
- Refer prescribing back to the specialist should problems arise that cannot be readily corrected.
- Refer prescribing responsibility back to the specialist if the patient becomes or plans to become pregnant.
- Stop treatment as advised by the specialist. Trial discontinuations and, if relevant, drug holiday plans should be managed by the specialist.

Table 2: General Practitioner Monitoring Responsibilities	
Monitoring	**Frequency**
See **Table 3: Adverse effects and other management** for the management of adverse effects and test results by primary care.	
• Height	Every 6 months for children & young people
• Weight & appetite	**If <10 years:** Every 3 months **If >10 years:** At 3 and 6 months after starting treatment, then every 6 months, or more often if concerns arise **Adults:** Every 6 months **Guanfacine – for all patients, every 3 months for the first year, and every 6 months thereafter.** Plot height and weight of children and young people on a growth chart and ensure review by the healthcare professional responsible for treatment. For growth charts visit UK-WHO growth charts - 2-18 years | RCPCH (Where monitoring results are already obtained from specialist every 6 months, then GP should monitor at 6 monthly intervals eg GP – specialist – GP – specialist)
• Blood pressure & heart rate and assessment for cardiovascular signs and symptoms • Assessment for new or worsening psychiatric and neurological signs or symptoms • Sleep difficulties • Somnolence and sedation • Suicidal ideation or behaviour	Every 6 months**, and after any change of dose recommended by specialist team. ****Guanfacine - every 3 months for the first year, and every 6 months thereafter**. Compare BP with the normal range for age. (Where monitoring results are already obtained from specialist every 6 months, then GP should monitor at 6 monthly intervals eg GP – specialist – GP – specialist)
• Assessment of adherence, and for any indication of ADHD medication abuse, misuse, or diversion	As required, based on the patient's needs and individual circumstances including if concerns with frequency of repeat prescription requests
• Ensure patient has been offered and attended a 6 monthly or annual review with a healthcare professional with expertise in ADHD	Children & young people – 6 monthly Adults – annually

Table 3: Adverse effects & other management	
Result	**Action for primary care**
As well as responding to absolute values in laboratory tests, a rapid change or a consistent trend in any value should prompt caution and extra vigilance	
Cardiovascular Resting HR 120bpm or greater, arrhythmia/palpitations, or systolic BP greater than the 95th percentile (or a clinically significant increase) measured on 2 occasions.	• In context of recent dose increase, revert to previous dose and discuss with specialist for ongoing management • In absence of recent dose changes, reduce dose by half and discuss with specialist or cardiology for further advice.
Symptoms such as palpitations, exertional chest pain, unexplained syncope, dyspnoea or other signs or symptoms suggestive of cardiac disease **(guanfacine)**	• Refer for urgent specialist cardiac evaluation
Marked decrease from baseline in heart rate **(guanfacine)**	• Discuss with specialist team; dose reduction or cardiac evaluation may be required
Hypotension or orthostatic hypotension (**guanfacine**)	• Give lifestyle advice (e.g. drinking plenty of fluids, getting up slowly from standing or sitting) and repeat monitoring. • If blood pressure decreases markedly from baseline, reduce dose of guanfacine by 1mg and discuss with specialist team.
Height and Weight Failure to thrive / retardation of growth	• Refer urgently to specialist service
Weight or BMI outside healthy range, **anorexia or weight loss**	Exclude other reasons for weight loss. Give advice as per NICE NG87: • take medication with or after food, not before • 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 Discuss with specialist if difficulty persists; dose reduction, treatment break, or change of medication may be required. Guanfacine - patients treated with guanfacine may show an increase in their BMI.

Table 3: Adverse effects & other management (continued)	
Result	**Action for primary care**
New or worsening **psychiatric symptoms**, e.g. psychosis, mania, aggressive or hostile behaviour, suicidal ideation or behaviour, motor or verbal tics (including Tourette's syndrome), anxiety, agitation or tension, bipolar disorder, depression	• Discuss with specialist. Consider stopping treatment and referring to acute mental health team if suicidal thoughts, mania, or psychosis are present.
Symptoms of **cerebral ischaemia**, e.g. severe headache, numbness, weakness, paralysis, and impairment of coordination, vision, speech, language or memory	• Discontinue medication, refer urgently for neurological assessment
New or worsening **seizures**	• Discuss with specialist team. Discontinuation of medication should be considered.
Symptoms of **serotonin syndrome,** e.g. agitation, hallucinations, coma, tachycardia, labile blood pressure, hyperthermia, hyperreflexia, incoordination, rigidity, nausea, vomiting, diarrhoea	• Discontinue medication as soon as possible. Management depends on severity; use clinical judgement - seek advice if necessary. • Discuss with specialist team to determine whether medication can be re-started.
Insomnia or other sleep disturbance, sedation, somnolence, sexual dysfunction	• Review timing of dose. Review lifestyle factors and reinforce to avoid alcohol. Give advice on sleep hygiene. • Discuss with specialist if difficulty persists; dose reduction or discontinuation may be required.
Nausea, diarrhoea, abdominal cramps, constipation, dry mouth, headache, dizziness, enuresis, increased urination	• Continue treatment unless severe. Some symptoms may be alleviated by concomitant food intake. Discuss with specialist if required
Signs or symptoms of **liver injury**, e.g. abdominal pain, unexplained nausea, malaise, jaundice, or darkening of urine	• Perform liver function tests (LFTs), including serum bilirubin, and discuss with specialist team.
Suspicion of abuse, misuse, or diversion	• Discuss with specialist team
Haematological disorders (methylphenidate) e.g. leukopenia, thrombocytopenia, anaemia NB: no haematological monitoring is recommended. Chance finding due to patient reporting adverse drug reactions.	• Contact specialist team. Discontinuation should be considered. Referral to haematology may be warranted; use clinical discretion

Patient / carer responsibilities:

- Take medication as prescribed and avoid abrupt withdrawal unless advised by their prescriber.
- Attend for monitoring and review appointments with primary care and specialist, and keep contact details up to date with both teams. Be aware that medicines may be stopped if they disengage or do not attend required reviews.
- Advise GP and specialist at review of any unplanned treatment holidays.
- Report any patient difficulties with following agreed treatment plan.
- Report any adverse effects or concerns in relation to treatment with medication.
- Seek medical attention if they develop any serious symptoms/side-effects as detailed in the Patient Information Leaflet
- Report the use of any over the counter medications (OTC) to their primary care prescriber and be aware they should discuss the use of ADHD medication with their pharmacist before purchasing any OTC medicines.
- Not to drive or operate heavy machinery if their ADHD, or medicines, affects their ability to do so safely, and inform the DVLA if their ability to drive safely is affected. https://www.gov.uk/adhd-and-driving
- Avoid alcohol during treatment, as it may make some side effects worse. Avoid recreational drugs.
- Methylphenidate , Lisdexamfetamine and Dexamfetamine are schedule 2 controlled drugs. Patients may be required to prove their identity when collecting prescriptions, and should store medication safely and securely. It must not be shared with anyone else. There are restrictions on travelling with controlled drugs: see https://www.gov.uk/guidance/controlled-drugs-personal-licences.
- Patients of childbearing potential should inform the specialist or GP immediately if they become pregnant or wish to become pregnant.

Patient information:

- Royal College of Psychiatrists – ADHD in adults. https://www.rcpsych.ac.uk/mental-health/problems-disorders/adhd-in-adults
- NHS – Attention deficit hyperactivity disorder. https://www.nhs.uk/conditions/attention-deficit-hyperactivity-disorder-adhd/
- Somerset NHS FT Choice & Medication leaflets https://www.choiceandmedication.org/somerset/printable-leaflets/

Advice to patients & carers:

The patient / carer should be advised to report any of the following signs or symptoms without delay:

- Symptoms suggestive of **cardiac disease** (e.g. palpitations, exertional chest pain, unexplained syncope, or dyspnoea).
- Signs or symptoms of **serotonin syndrome** (e.g. agitation, hallucinations, coma, tachycardia, labile blood pressure, hyperthermia, hyperreflexia, incoordination, rigidity, nausea, vomiting, diarrhoea)
- Report **suicidal thoughts or behaviour**, and development or worsening of irritability, agitation, and depression.
- Any **mood changes**, for example. psychosis, mania, aggressive or hostile behaviour, suicidal ideation or behaviour, motor or verbal tics (including Tourette's syndrome), anxiety, agitation or tension, anxiety, depression
- New or worsening **neurological symptoms** (e.g. severe headache, numbness, weakness, paralysis, and impairment of coordination, vision, speech, language or memory)
- Risk of **hepatic injury**: report unexplained nausea, malaise, jaundice, or darkening of urine, and new onset severe or persistent abdominal pain.
- Skin rashes, or bruising easily
- Symptoms of **allergic or anaphylactic reactions** (e.g. rash, angioedema, or urticaria).
- For methylphenidate & atomoxetine: Abnormally sustained or frequent and painful erections. **If an erection persists for more than 2 hours go to A&E**; this is an emergency.
- For atomoxetine: Sudden acute, painful eye(s), impaired vision, red eye(s), and/or semi-dilated and fixed pupil; risk of **angle closure glaucoma**, seek immediate medical attention, ideally from an eye casualty unit or A&E.

The patient / carer should be advised:

- Read and keep the Patient Information Leaflet (PIL) for the medication.
- Attend regularly for monitoring and review appointments with primary care and specialist, and keep contact details up to date with both prescribers. It may not be safe to continue prescribing without regular review, and patients should be aware that their medicines could be stopped if they do not attend appointments.
- Not to drive or operate machines if the medication affects their ability to do so safely, e.g. by causing dizziness, drowsiness, or visual disturbances.
- People who drive must inform the DVLA if their ADHD, or medicines affect their ability to drive safely. See https://www.gov.uk/adhd-and-driving or https://www.gov.uk/narcolepsy-and-driving.
- Avoid alcohol while taking medication, as it may make side effects worse. Avoid recreational drugs.

- Not to stop taking medication abruptly. Patients wishing to reduce their dose or stop treatment should discuss with their specialist before doing so.
- Not to share their medicines with anyone else.
- Methylphenidate, Lisdexamfetamine and Dexamfetamine are Schedule 2 controlled drug. Patients may be required to prove their identity when collecting prescriptions, and should store medication safely and securely. Medication must not be shared with anyone else. There are restrictions on travelling with controlled drugs: see https://www.gov.uk/guidance/controlled-drugs-personal-licences.
- Maintain hydration in hot weather and take care not to overheat which may occur when taking some ADHD medication.

Further support

- Contact specialist team via agreed channels.
- Prescribing & Medicines Management Team, NHS Somerset: 01935 384123

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V1.0 Drawn up by:	Shaun Green Head of Medicines Management Somerset CCG	October 2013
V2.0 Updated by:	Catherine Henley Somerset CCG	January 2017
Approved by:	Somerset Prescribing Forum, NHS Somerset	April 2017
	Drug & Therapeutics Committee, Taunton & Somerset NHS FT	April 2017
	Drug & Therapeutics Committee, Yeovil and District NHS FT	April 2017
	MH Drug & Therapeutics Committee, Somerset Partnership NHS FT	April 2017
V3.0 Updated by:	Dr Tyrone Trower Consultant in Child and Adolescent Psychiatry, SPFT, Dr Sathya Cherukuri, Consultant Psychiatrist, SPFT & Sam Morris, Somerset CCG	December 2020
Approved by:	Somerset Prescribing Forum, NHS Somerset CCG MH Drug & Therapeutics Committee, Somerset NHS FT	January 2021
Updated by:	Amendments made to Version 3.1 by Hels Bennett, Medicines Manager, CCG – 'SomPar' changed to 'Somerset NHS FT', Delmosart® added to preferred brand list	August 2021
Updated by:	Amendments made to Version 3.2 by Hels Bennett, Medicines Manager, NHS Somerset ICB – NHS Somerset logo updated, introduction section updated to clarify "SCP applies to children over 6yrs, adolescents and adults." (i.e. adults diagnosed in childhood or adulthood)	December 2022
Updated by:	Amendments made to Version 3.3 by Hels Bennett, Medicines Manager, NHS Somerset ICB - Affenid XL	October 2023

	tablets and Metyrol XL capsules added to preferred brands list.	
V4.0 Updated by:	Dr Reenee Barton, Consultant in Child and Adolescent Psychiatry, SPFT, Dr Nadeera Sanjeewani, Specialty Doctor in Child and Adolescent Psychiatry, SPFT & Hels Bennett & Sam Morris, Medicines Managers, NHS Somerset ICB Full review of document. Updated to new ICB format. Guanfacine added. Added for clarity following MPB - (*Where monitoring results are already obtained from specialist every 6 months – then GP should monitor at 6 monthly intervals eg GP – specialist – GP – specialist)* as per previous version. Minor updates following MPB.	March 2024
Approved by:	NHS Somerset Medicines Programme Board	27.03.2024
	Drug & Therapeutics Committee, Somerset NHS FT	N/A
	MH Drug & Therapeutics Committee, Somerset NHS FT	
V4.1 updated by:	Hels Bennett, Medicines Manager, NHS Somerset ICB Minor update page 2 to clarify 2nd line medication choice: Lisdexamfetamine **or** Dexamfetamine	October 2025
Review by:		March 2027

References

- eBNF https://bnf.nice.org.uk/
- Summaries of Product Characteristics at: https://www.medicines.org.uk/emc
- NICE NG87: Attention deficit hyperactivity disorder: diagnosis and management. Last updated September 2019 https://www.nice.org.uk/guidance/ng87/
- Intuniv 1 mg prolonged-release tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk)
- Atomoxetine 10 mg Capsules, Hard - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk)
- Considerations when prescribing guanfacine – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice
- National shared care protocol: Methylphenidate in adult services 4 July 2022, Version 1 https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/
- National shared care protocol: Atomoxetine for patients within adult services 4 July 2022, Version 1 https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/
- National shared care protocol: Dexamfetamine for patients within adult services 4 July 2022, Version 1 https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/
- National shared care protocol: Lisdexamfetamine for patients within adult services 4 July 2022, Version 1 https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/
- National shared care protocol: Guanfacine for patients within adult services 4 July 2022, Version 1 https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/

- UKTIS. Use of methylphenidate in pregnancy. https://uktis.org/monographs/use-of-methylphenidate-in-pregnancy/
- Safety in Lactation: Drugs for ADHD – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice
- General Medical Council. Good practice in prescribing and managing medicines and devices. Shared care. Available from https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-practice-in-prescribing-and-managing-medicines-and-devices/shared-care
- NICE NG197: Shared decision making. Last updated June 2021. https://www.nice.org.uk/guidance/ng197/
- NICE NG43: Transition from children's to adults' services for young people using health or social care services. Last updated February 2016. https://www.nice.org.uk/guidance/ng43/
- Attention deficit hyperactivity disorder (ADHD) and driving - GOV.UK (www.gov.uk)
- Considerations when prescribing modified-release methylphenidate – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice
- Prescribing available medicines to treat ADHD – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice
- Drugs and Lactation Database (LactMed®) - NCBI Bookshelf (nih.gov)