

# North Central London Joint Formulary Committee

# Shared Care Guideline Methylphenidate (immediate release and long - acting), Lisdexamfetamine, Atomoxetine and Dexamfetamine for treatment of Adult Attention Deficit Hyperactivity Disorder (ADHD)

Dear Primary care prescriber,

The information in the shared care guideline (SCG) has been developed in consultation with Primary Care and it has been agreed that it is suitable for shared care.

Sharing of care assumes good communication between the specialist, primary care prescriber and patient. The intention to share care should be explained to the patient by the specialist when treatment is initiated. It is important that patients are consulted about treatment and are in agreement with it, and that shared care only takes part when the GP gives willing and informed consent that it can happen safely.

This document uses the words woman/women/she/her when discussing issues of pregnancy and breastfeeding, as these are only relevant to those of the female sex. Sensitivity and preferred pronouns should be used when a patient's gender identity does not correspond with their sex as registered at birth.

It is not intended that the NCL SCG is used or adopted by any service provider other than the locally commissioned NCL ADHD services.

#### **Contents**

1.	Intro	oduction Target Audience	. 2
		red Care Criteria	
		red Care Responsibilities	
		Consultant and /or Specialist	
		Primary Care Prescriber	
		Patient Responsibility	
		Integrated Care Board	
		cations	

5.	Dose and Administration	5
6.	Adverse Effects	10
7.	Cautions	13
8.	Pregnancy, breastfeeding and paternal exposure	15
9.	Clinical Monitoring	17
10.	Contraindications	19
11.	Drug Interactions	19
12.	References	22
13.	Associated documents	23
14.	Contact Details	23
Арр	endix 1: transfer form: from [Trust] to GP practice	27

# 1. Introduction Target Audience

This document should provide sufficient information to enable you to make an informed decision regarding the clinical and legal responsibility for prescribing these drugs for the treatment of ADHD in adults.

- Methylphenidate (immediate release and long acting).
- Lisdexamfetamine.
- Atomoxetine.
- Dexamfetamine.

Progressing to a stable, optimal dose usually takes approximately 8-12 weeks. Once achieved, a shared care arrangement with you will be requested. It will clarify responsibilities between the specialist and general practitioner (GP) for managing the prescribing and monitoring of methylphenidate (immediate release and long acting), lisdexamfetamine, atomoxetine and dexamfetamine such as:

- Who will prescribe;
- Who will monitor;
- Any tests required (e.g. ECG), the exact names/nature of the tests, why they are needed, the frequency of testing, the location in which these will be carried out and action to be taken for any abnormal results
- Which clinician will be responsible for receipt and review of the results;
- Who will communicate any necessary changes in dose to the patient and the GP;

ADHD is a neurodevelopmental condition which manifests as cognitive and behavioural deficits. It is characterised by the core symptoms of hyperactivity, impulsivity and inattention. ADHD is thought to be a persistent condition. A diagnosis of adult ADHD should only be made by specialist psychiatrist or appropriately qualified healthcare professional with training and expertise in the diagnosis of adult ADHD. Drug treatments for adults with ADHD should always form part of a comprehensive treatment programme that focuses on psychological, behavioural and educational or occupational needs.

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT

Where a person with ADHD is treated by a Child and Adolescent Mental Health Service (CAMHS) but is approaching their 18th birthday, it is expected that CAMHS will refer to the appropriate adult service if need for ongoing treatment is anticipated.

# 2. Shared Care Criteria

Drug treatments used for ADHD will be prescribed for the treatment of adults with a confirmed diagnosis of moderate to severe ADHD using DSM-V / ICD 11 criteria. Initial dose titration of the chosen medication will take place under the care of specialist mental health services. Once the patient has been titrated to maintenance dose and stable they will be given a further prescription for 28 days of their maintenance dose. Advice will be given in a letter to continue with treatment in primary care and request for shared care by completing Appendix 1.

# 3. Shared Care Responsibilities

# 3.1. Consultant and /or Specialist

Send a letter to the GP, with the shared care agreement, at the point where the patient is stable on a set dose of a medication for ADHD. Dose and frequency of medication to be decided by the Adult ADHD service team.

- Before initiating treatment, perform all necessary tests before starting treatment with medication including specialist ADHD assessment, medical assessment (including blood tests, BMI, pulse, BP and ECG where indicated), screen for substance and alcohol misuse. Interpret and communicate the results of these tests to the patient's GP
- 2. Discuss the benefits and side effects of treatment with the patient. Provide the patient with a Patient Information Leaflet, explain it and ensure that the patient understands the reason for the treatment, and dosing regimen. Inform the patient that treatment is off-label, where applicable.
- Initiate treatment and prescribe in accordance with NICE and locally agreed clinical guidelines until the GP formally agrees to share care. Patients will be seen in the clinic prior to consideration of shared care.
- 4. Discuss the shared care arrangement with the patient.
- 5. Provide results of baseline tests and recommend frequency of monitoring to GP. The specialist must also explain what the recommended tests are, why they are needed and the location in which these tests will be carried out.
- 6. Send a letter to the GP after each clinic attendance ensuring that the current dose, weight, pulse, blood pressure, and frequency of monitoring are stated.
- 7. Inform the GP of test results, actions to take in case of abnormal results, and advise the GP on any dose adjustments or if the treatment should be stopped.
- 8. Evaluate adverse effects reported by GP or patient.
- 9. Report adverse events to the MHRA (via the yellow card scheme) and GP.
- 10. Inform the GP of patients who do not attend clinic appointments.
- 11. Trial discontinuations should be managed by the specialist.
- 12. GPs are able to obtain advice and support from the specialist.
- 13. Discuss family planning, when the patient is a woman of child-bearing age.

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# 3.2. Primary Care Prescriber

Complete the transfer form and send back to the Adult ADHD service confirming acceptance/ rejection of shared care for the patient. If there are concerns about the treatment, there should be liaison with the specialist to resolve concerns. If the GP is unable to agree to shared care, inform the Adult ADHD service stating reasons within 14 days of receipt of the request. If no response is received within 14 days, the specialist will assume the GP has accepted shared care.

- Monitor the patient's overall health and well-being and offer follow-up and monitoring of BP, pulse and BMI. as recommended by NICE for adults who take ADHD medication (see clinical monitoring section). Do not offer routine blood tests (including liver function tests) or ECGs to people taking medication for ADHD unless there is a clinical indication.
- 2. Prescribe the drug treatment as described (including the brand if methylphenidate Slow Release being prescribed). The term "as directed" SHOULD NOT be used.
- 3. Ensure that the patient understands the dosing.
- 4. Ensure the patient understands that he/she must report the warning symptoms as listed under "adverse effects". Ensure compatibility with concomitant medication.
- 5. Monitor results at recommended frequencies as described under "clinical monitoring" and inform the specialist if abnormal.
- 6. Adjust the dose as advised by the specialist (where applicable).
- 7. Seek advice (over the phone or by requesting a review in the clinic) whenever there are concerns or questions about the patient's ongoing treatment with medication for ADHD.
- 8. Report any known adverse events and non-compliance to the specialist and the MHRA, where appropriate (See 'Adverse effects' section of the document). It is not expected that the GP would actively monitor for adherence, but if it is noticed that prescriptions are not being requested as expected or requested too frequently, the GP should inform the specialist.
- 9. Stop treatment on the advice of the specialist or immediately if an urgent need arises and make an urgent referral for appropriate care if cerebral ischaemia, new or worsening seizures, or serotonin syndrome are suspected.

Contact the specialist if the patient becomes or plans to become pregnant. Consider referral to the NCL perinatal team.

#### 3.3. Patient Responsibility

- Attend all Adult ADHD service and GP appointments. If the patient does not attend their appointment repeatedly they may be discharged from the service and medication may be stopped.
- 2) Take medicines as agreed.
- 3) Report to the specialist or GP if s/he does not have a clear understanding of the treatment.
- 4) Inform the specialist or GP of any other medication being taken, including over-the-counter products.
- 5) Report any adverse effects or warning symptoms to the GP or specialist.
- 6) Inform Adult ADHD service and GP of any changes in address or telephone numbers.
- 7) Not to drive or operate heavy machinery if methylphenidate affects their ability to do so safely, and inform the <u>DVLA</u> if their ability to drive safely is affected. To discuss with the specialist if they are not sure if their condition will affect their driving.

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT V1.4

- 8) Avoid alcohol during treatment, as it may make some side effects worse. Avoid recreational drugs.
- 9) Stimulants (methylphenidate, lisdexamfetamine, and dexamfetamine) are schedule 2 controlled drug. Patients may be required to prove their identity when collecting prescriptions, and should store methylphenidate safely and securely. It must not be shared with anyone else.
- 10) Patients of childbearing potential should take a pregnancy test if they think they could be pregnant, and inform the specialist or GP immediately if they become pregnant or wish to become pregnant.

#### 3.4. Integrated Care Board

- 1) To provide feedback to Trusts from the standard letter, via the shared care forum. To support GPs to make the decision whether or not to accept clinical responsibility for prescribing. Shared care can be declined if not appropriate with reasons provided in response to shared care request (Appendix 1).
  - 2) To support Trusts and GPs in resolving issues that may arise as a result of shared care.

#### SUPPORTING INFORMATION

For further details refer to the manufacturer's <u>Summary of Product Characteristics (SmPC)</u> and the current BNF.

#### 4. Indications

Currently, most methylphenidate and all dexamfetamine preparations do not have UK marketing authorisation for use in adults with ADHD. Hence, the prescription of methylphenidate and dexamfetamine after the age of 18 years is considered 'off-label'. However, its use for the indications below are established and supported by various sources and bodies including the BNF and NICE. Adults with ADHD who have shown clear benefit from methylphenidate in childhood or adolescence may continue treatment into adulthood at the same daily dose. Informed consent should be obtained and documented.

Atomoxetine and lisdexamfetamine are licensed for the treatment of ADHD in adult patients when the presence of the condition in childhood can be confirmed.

NICE guidance recommends medication as the first choice in the treatment of adults with moderate/severe ADHD. Consult the SmPC for the prescribed brand for more information.

# 5. Dose and Administration

Refer to the current <u>SmPC</u> for the most recent information. ADHD medication has faced significant supply chain problems recently. Further information on supply chain can be found on the <u>SPS website</u>. Information on switching between products is available on the <u>NCL GP website</u>.

Drugs covered by this SCG	Brand, formulation, administration, and conditions requiring dose adjustment	Action	Dosage
Methylphenidate	Medikinet®: 5mg, 10mg, 20mg	CNS stimulant	Recommended starting
Immediate Release	Methylphenidate hydrochloride	Schedule 2	dose: 5 mg, given 2-3

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT

(1 <sup>st</sup> line treatment)	(generic): 5mg, 10mg, 20mg Ritalin®: 10mg Tranquilyn®: 5mg, 10mg, 20mg NB: Methylphenidate standard release tablets are not licensed for use in adults. Use is considered 'off- label'. Brand name prescribing is not necessary for standard release tablets.	controlled drug	times daily. The dose should be titrated to response, usually at weekly intervals.  Maximum dose: up to 100 mg daily in 2-3 divided doses
Methylphenidate Modified Release (1st line treatment)	Modified released preparations vary in their release characteristics and must be prescribed by brand name (MHRA Alert 2022). The specialist must specify the brand to be prescribed.  Prolonged-release TABLETS: Affenid XL®: 18mg, 27mg, 36mg, 54mg Concerta XL®: 18mg, 27mg, 36mg, 54mg Delmosart®: 18mg, 27mg, 36mg, 54mg Matoride XL®: 18mg, 27mg, 36mg, 54mg Xaggitin XL®: 18mg, 27mg, 36mg, 54mg Xaggitin XL®: 18mg, 27mg, 36mg, 54mg Xenidate XL®: 18mg, 27mg, 36mg, 54mg NB: Methylphenidate prolonged-release tablets are licensed for continuation in adults who have shown clear benefit from treatment in childhood and/or adolescence. They are not licensed for initiation in adults. Use in this way is considered 'off-label'.  Modified-release CAPSULES: Equasym XL®: 10mg, 20mg, 30mg Medikinet XL® ▼: 5mg, 10mg, 20mg, 30mg, 40mg, 60mg Ritalin XL®: 10mg, 20mg, 30mg, 40mg, 60mg Ritalin XL®: 10mg, 20mg, 30mg, 40mg, 60mg Ritalin XL®: 10mg, 20mg, 30mg, 40mg, 60mg	CNS stimulant Schedule 2 controlled drug	Recommended starting dose:  Modified release tablets: 18 mg daily, given in the morning. Dose should be titrated to response, usually at weekly intervals.  Modified release capsules: 10-20 mg daily. Dose should be titrated to response, usually at weekly intervals.  Maximum dose:  Modified release tablets: up to 108 mg once daily, given in the morning  Modified release capsules: up to 100 mg daily. May be given as a single dose in the morning or in divided doses in the morning and at midday, depending on brand.  NB. The maximum licensed daily dose varies with formulation and brand; consult BNF and SmPC.
	NB: Ritalin XL®, Metyrol XL® and		

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT V1.4 6 of 28

Medikinet XL® modified release capsules are licensed for initiation and continuation in adults. Equasym XL® is not licensed for use in adults. Administration: Administration requirements vary by formulation and brand. Methylphenidate can be taken with or without food, but patients should standardise which method is chosen. Dependant on the brand, methylphenidate capsules can be opened and sprinkled on a small amount of soft food for administration. Please consult the relevant SmPC for brand-specific information. If a dose is missed then the next scheduled dose should be taken as usual; a double dose should not be taken to make up for a missed dose. Lisdexamfetamine ▼ Elvanse Adult® (lisdexamfetamine CNS stimulant **Initial stabilisation:** dimesylate) 30mg 50mg and 70mg (1<sup>st</sup> line treatment) Schedule 2 30 mg taken once daily hard capsules ( controlled in the morning, Elvanse® (lisdexamfetamine drug increased in increments dimesylate) 20mg, 30mg, 40mg, of 20 mg at intervals no shorter than 1 week. 50mg, 60mg and 70mg hard capsules – use in adults may be Lower starting doses considered 'off-label'. may be used if clinically appropriate ('off-label' use). **Administration:** The dose may be taken with or Maintenance dose without food. (following initial stabilisation): Lisdexamfetamine capsules may be Maximum 70 mg per swallowed whole, or the capsule day. opened and the entire contents emptied and mixed with a soft food such as yogurt or in a glass of water

North Central London Joint Formulary Committee
Shared Care: Methylphenidate (immediate release and long-acting),
Atomoxetine, Dexamfetamine and Lisdexamfetamine
Produced by C&I MH FT
V1.4

or orange juice. Please consult the

7 of 28

	relevant SmPC for further information.  If a dose is missed then the next scheduled dose should be taken as usual; a double dose should not be taken to make up for a missed dose. Afternoon doses should be avoided because of the potential for insomnia.		
	Conditions requiring dose adjustment: In severe renal impairment (GFR 15-30mL/min/1.73m² or CrCl < 30mL/min), the recommended maximum dose is 50 mg per day.		
Dexamfetamine (2 <sup>nd</sup> line treatment) Consider dexamfetamine for adults whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile.	Amfexa® (dexamfetamine sulfate) 5mg, 10mg,20mg immediate release tablets ( Dexamfetamine sulfate 5mg immediate release tablets Dexamfetamine sulfate 5mg/5mL sugar-free oral solution  Administration: Tablets can be divided for ease of swallowing. Please consult the relevant SmPC for specific information.  Dexamfetamine should not be taken too late after lunch time to avoid disturbances of sleep.  If a dose is missed then the next scheduled dose should be taken as usual; a double dose should not be taken to make up for a missed dose.	CNS stimulant Schedule 2 controlled drug	Initial stabilisation: Initially 5 mg twice daily, dose should be increased according to response at intervals no shorter than 1 week.  Maintenance dose (following initial stabilisation): Maximum 60 mg per day to be given in 2–4 divided doses;
Atomoxetine (2 <sup>nd</sup> line treatment) Offer atomoxetine to adults if: • they cannot tolerate lisdexamfetamine or	Atomoxetine hydrochloride hard capsules: 10 mg, 18 mg, 25 mg, 40 mg, 60 mg, 80 mg, 100 mg Atomoxetine hydrochloride 4 mg/mL sugar free oral solution  Administration:	Selective noradrenaline reuptake inhibitor (not a controlled drug)	Initial stabilisation:  Adults weighing 70 kg or above: 40 mg daily for at least 7 days  Adults weighing up to 70 kg: 500 micrograms/kg daily for

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT V1.4 8 of 28

methylphenidate or

• their symptoms have not responded to separate 6-week trials of lisdexamfetamine and

methylphenidate, having considered alternative preparations and adequate doses. Atomoxetine can be taken with or without food.

Capsules should not be opened for administration: risk of irritation.

Oral solution should not be mixed with food or water; it can prevent the full dose being administered and can negatively affect the taste.

If a dose is missed then take it as soon as possible, but no later than the early evening. Do not take more than the usual total daily dose in any 24-hour period. A double dose should not be taken to make up for a missed dose.

# Conditions requiring dose adjustment:

Hepatic insufficiency:

- moderate hepatic insufficiency (Child-Pugh Class B) reduce starting and target doses to 50% of usual dose (reduce dose by half, i.e. starting dose should be 20mg daily, and total daily dose should not exceed 50mg daily).
- severe hepatic insufficiency (Child-Pugh Class C) reduce starting and target doses to 25% of usual dose (reduce dose by three quarters, i.e. starting dose should be 10mg daily, and total daily dose should not exceed 25mg daily).

#### Renal insufficiency:

No adjustment is necessary, but be aware that atomoxetine may exacerbate hypertension in patients with end stage renal disease.

Known CYP2D6 poor metaboliser genotype:

Due to several-fold increase in atomoxetine exposure, consider a

at least 7 days

Then titrated according to clinical response and tolerability. Total daily dose may be given as a single dose in the morning or in two equally divided doses, with the last dose no later than the early evening.

#### Maintenance dose

(following initial stabilisation):

 Adults weighing 70 kg or above: 80 mg to 100 mg daily in a single dose, or in two equally divided doses, as above.

Usual maximum total daily dose is 100 mg. Higher doses, up to a maximum of 120 mg, are 'off-label' and must be given under the direction of a specialist.

• Adults weighing up to 70 kg: up to 1.2 mg/kg daily in a single dose, or in two equally divided doses, as above. Usual **maximum** total daily dose is 1.8 mg/kg daily. Higher doses, up to a maximum of 120 mg, are 'off-label' and must be given under the direction of a specialist.

9 of 28

lower starting dose and slower uptitration.	

**Guanfacine (Intuniv®)**: is a centrally-acting adrenergic medicine indicated for the treatment of ADHD in children and adolescents. Use in adults is 'off-label'. It may be recommended for people who have not responded to one or more stimulants, and one non-stimulant (see <a href="NICE Guidance NG87 Attention">NICE Guidance NG87 Attention</a> deficit <a href="https://doi.org/10.108/hyperactivity disorder: diagnosis and management">Management</a>). Guanfacine is currently not approved in the local formulary for adults and requires prescribing under non-formulary prescribing protocols.

**Further medication choices and combination prescribing**: There was not enough evidence to justify specific recommendations for other drugs, above maximum BNF doses, or combination treatments, after at least one stimulant and non-stimulant had been tried. The specialist should obtain a second opinion or refer to a tertiary service. Non-formulary and off label prescribing must have approval through the secondary care non-formulary process.

#### **Prescribing Schedule 2 Controlled Drugs (CDs):**

Methylphenidate, lisdexamfetamine and dexamfetamine (including all brand preparations) are Schedule 2 CDs and hence subject to prescription requirements i.e. must be indelible, signed by the prescriber, be dated and specify the prescriber's address. The prescription must always state:

- Name and address of patient
- Form and strength of preparation (e.g. 20 mg capsules)
- Dose (e.g. 20 mg TDS) A dose of 'as directed' cannot be used
- Total quantity or number of dose units in words AND figures e.g. 420 mg = Four Hundred and Twenty milligrams or Twenty One (21) capsules.

Advanced electronic signatures can be accepted for Schedule 2 and 3 CDs where the Electronic Prescribing Service (EPS) is in place.

A prescription is valid for 28 days from the date stated thereon. Prescriptions are limited to a supply of 30 days treatment; exceptionally to cover a justifiable clinical need and after consideration of any risk, a prescription can be issued for a longer period, but the reasons for the decision should be recorded in the patient's medical notes.

Appropriate communication must occur between the specialist team and GP to ensure no overlap in prescribing.

Refer to most recent **BNF** for further details.

## 6. Adverse Effects

For a full list of adverse effects, refer to the individual  $\underline{\text{SmPC}}$ .

Possible adverse effects and what to do if they occur:

Adverse Effect	GP Management
Adverse Effect	GP Management

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT

METHYLPHENIDATE, LISDEXAMFE	METHYLPHENIDATE , LISDEXAMFETAMINE, DEXAMFETAMINE				
Cardiovascular  Resting HR greater than 120bpm, arrhythmia/palpitations, clinically significant increase in systolic BP	common (≥ 1/100 to < 1/10)	<ul> <li>In context of recent dose increase, revert to previous dose and discuss with specialist for ongoing management</li> <li>In absence of recent dose changes, consider reducing dose by half or discontinuing the medication in light of clinical findings.</li> <li>Further investigations should be considered (including ECG, 24 hour BP and 24 hour ECG). Consider referral to cardiology/specialist physician.</li> </ul>			
Weight or BMI outside healthy range Decreased appetite (anorexia or weight loss)	very common (≥ 1/10) - common ((≥ 1/100 to < 1/10)	Usually transient.  Exclude other reasons for weight loss. Give advice as per NICE NG87:  take medication with or after food, not before  take 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 the specialist if difficulty persists; dose reduction, treatment break, or change of medication may be required.			
Haematological disorders Including leukopenia, thrombocytopenia, anaemia or other alterations NB: no haematological monitoring is recommended. Haematological disorders would be a chance finding/due to patient reporting adverse drug reactions.	very rare (<1/10,000)	Contact specialist team. Discontinuation should be considered. Referral to haematology may be warranted; use clinical discretion.			
Psychiatric disorders  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.	common (≥ 1/100 to < 1/10) - very rare (<1/10,000	Discuss with the specialist. Stop treatment and consider referral to the acute mental health team if suicidal thoughts, mania, or psychosis are present. Medication should not be continued unless the benefits outweigh the risks.			

Nervous system disorders  Symptoms of cerebral ischaemia, e.g. severe headache, numbness, weakness, paralysis, and impairment of coordination, vision, speech, language or	very rare (<1/10,000	Discontinue medication. Refer urgently for neurological assessment.
New or worsening seizures	Frequency not known	Discontinue medication. Discuss with the specialist team.
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 judgment and seek advice if necessary.  Discuss with the specialist team to determine whether medication can be restarted.
Insomnia or other sleep disturbance	very common (≥ 1/10)	Review the timing of doses and continue treatment unless severe. Advise on sleep hygiene. Discuss with the specialist if required.
Nausea, diarrhoea, abdominal cramps, constipation, dry mouth, headache, dizziness, enuresis, increased daytime urination, tics		Continue treatment unless severe. Some symptoms may be alleviated by concomitant food intake. Discuss with the specialist if required.
Suspicion of abuse, misuse, or diversion		Discuss with the specialist team and/or the police/medical defence organisation
ATOMOXETINE		
Cardiovascular  Resting HR greater than 120bpm, arrhythmia/palpitations, clinically significant increase in systolic BP	uncommon (≥ 1/1000 to < 1/100)	<ul> <li>In context of the recent dose increase, revert to the previous dose and discuss with the specialist for ongoing management</li> <li>In absence of recent dose changes, consider reducing the dose by half or discontinuing the medication in light of clinical findings. Further investigations should be considered including ECG, 24-hour BP and 24-hour ECG. Consider referral to a cardiology/specialist physician.</li> </ul>
Gastrointestinal disorders Including abdominal pain, vomiting, nausea, constipation, dyspepsia	Very common (≥ 1/10) to common (≥1/100 to <1/10)	Review and provide dosing advice; patients may benefit from taking atomoxetine in two equally divided doses (once in the morning, and once in the late afternoon or early evening). Generally resolves.

Weight or BMI outside healthy range Including anorexia or weight loss	very common (>- 1/10) to common (≥1/100 to <1/10)	Recommend small, frequent meals and/or snacks, and high-calorie foods of good nutritional value.  Recommend taking atomoxetine with or after meals, and not before. Obtain dietary advice if required.  Discuss with the specialist if difficulty persists; dose reduction, treatment break, or change of medicine may be required.
Psychiatric disorders  New or worsening psychiatric symptoms, e.g. suicide related behaviour, psychosis, mania, aggressive or hostile behaviour, suicidal ideation or behaviour, motor or verbal tics (including Tourette's syndrome), anxiety, agitation or tension, bipolar disorder, or depression	common (≥1/100 to <1/10) to uncommon (≥1/1,000 to <1/100)	Contact the specialist team and refer for psychiatric assessment if appropriate. Refer for urgent psychiatric assessment if suicide-related behaviour or ideation occurs.  Discuss the ongoing benefit of treatment with the specialist team.
Hepatic effects Signs or symptoms of liver injury, e.g. abdominal pain, unexplained nausea, malaise, jaundice, or darkening of urine	rare (≥ 1/10,000 to < 1/1,000)	Perform liver function tests (LFTs), including serum bilirubin, and discuss with the specialist team.  Discontinue atomoxetine permanently in patients who develop jaundice or for whom there is laboratory evidence of liver injury (if unclear if injury or transient derangement, discuss urgently with specialist).
Nervous system disorders Somnolence or sedation	very common (≥ 1/10)	Review and provide dosing advice; patients may benefit from taking atomoxetine in two equally divided doses (once in the morning, and once in late afternoon or early evening).  Generally resolves.
New onset of seizures, or increased seizure frequency	uncommon (≥1/1,000 to <1/100)	Discuss with the specialist team. Discontinuation of atomoxetine should be considered.

Suspected adverse drug reactions should be reported to the MHRA using the  $\underline{Yellow\ Card\ Scheme}$ . Refer to BNF for further details.

# 7. Cautions

For a full list of the cautions, refer to the individual <u>SmPC</u>.

# Methylphenidate:

Agitation; anxiety; alcohol consumption (not recommended during treatment); epilepsy (discontinue if increased seizure frequency); family history of Tourette syndrome; susceptibility to angle-closure glaucoma; tics; Family history of sudden cardiac or unexplained death, malignant arrhythmia; underlying conditions which might be compromised by increases in blood pressure or heart rate; known/history of drug or alcohol dependency or misuse of central nervous system (CNS) stimulants:; renal or hepatic insufficiency (due to lack of data); leukopenia, thrombocytopenia, anaemia, or other haematological abnormalities; prolonged-release tablets only: severe narrowing of the gastrointestinal tract or dysphagia; risk of obstruction; pregnancy or breast-feeding; potential for abuse, misuse, or diversion.

#### **Dexamfetamine / Lisdexamfetamine:**

Bipolar disorder; history of cardiovascular disorders e.g. structural cardiac abnormalities, cardiomyopathy, arrhythmias, coronary artery disease, mild hypertension, recent myocardial infarction or heart failure; may lower seizure threshold (discontinue if seizures occur); psychotic disorders; depressive symptoms, susceptibility to angle-closure glaucoma; tics; Tourette syndrome; known/history of drug or alcohol dependency; avoid abrupt withdrawal; family history of sudden cardiac or unexplained death; underlying medical conditions or concomitant drugs which can increase the QT- interval or heart rate, or elevate blood pressure (e.g. cardiac disease, electrolyte disturbance); severe renal impairment; GFR 15-30mL/min/1.73m2 or CrCl less than 30mL/min. Dose reduction is required (lisdexamfetamine only); hepatic insufficiency (due to lack of data); pregnancy (lisdexamfetamine only) or breastfeeding; potential for abuse, misuse, or diversion.

#### Atomoxetine:

QT-interval prolongation; aggressive behaviour; cardiovascular disease; cerebrovascular disease; emotional lability; history of seizures; hostility; hypertension; mania; psychosis; structural cardiac abnormalities; susceptibility to angle-closure glaucoma; tachycardia; suicide-related behaviour (suicide attempts or suicidal ideation); motor or verbal tics; anxiety; depressive symptoms; mania; hepatic insufficiency (dose adjustments required); known CYP2D6 poor metaboliser genotype (dose reduction required); orthostatic hypotension.

# 8. Pregnancy, breastfeeding and paternal exposure

It is the responsibility of the specialist to provide advice on the need for contraception to male and female patients on initiation and at each review, but the ongoing responsibility for providing this advice rests with both the primary care prescriber and the specialist. It is important that maternal ADHD is adequately controlled during pregnancy. The risks of destabilisation and maternal relapse must be taken into account when considering dose reduction or switching a patient from one medication to another. Prescribing of any ADHD medication during pregnancy and breastfeeding, or where a patient informs her GP/specialist that she is trying to conceive, will be done by the specialist, with shared care resuming when breastfeeding has ended.

#### Methylphenidate

#### Pregnancy:

- Methylphenidate is not recommended for use during pregnancy unless a clinical decision is made that postponing treatment may pose a greater risk to the pregnancy.
- Evidence on exposure to methylphenidate during pregnancy is too limited to draw firm conclusions on adverse outcomes. Clinicians should be aware that patients may have other risk factors which independently alter the risks.
- Patients who become pregnant while taking methylphenidate, or who plan a pregnancy, should be referred to the specialist team for review.

Healthcare professional information is available here.

Patient information is available here.:

#### **Breastfeeding:**

- Methylphenidate has been found in breast milk in small amounts. Evidence for safety in breastfeeding is limited.
- Decisions to use while breastfeeding should be made on a case-by-case basis, taking into account the risks to the infant and the benefits of therapy to the woman.
- If breastfeeding does take place, infants should be monitored for symptoms of CNS stimulation (e.g. decreased appetite/weight gain, sleep disturbances, irritability), although these may be difficult to detect.
- High doses may interfere with lactation, although this is not confirmed in practice.

Healthcare professional information is available here (USA resource).

#### Paternal exposure:

No evidence regarding adverse outcomes following paternal exposure was identified.

Further information for patients is available at the following website: www. medicinesinpregnancy.org

#### Lisdexamfetamine and Dexamfetamine

#### Pregnancy:

- The active metabolite of lisdexamfetamine, dexamfetamine, is thought to cross the placenta.
- The limited data available shows an increased risk of premature birth, reduced birth weight and preeclampsia. Infants may also develop withdrawal symptoms such as dysphoria, hyperexcitability and pronounced exhaustion.

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- Dexamfetamine is not recommended for use during pregnancy.
- Lisdexamfetamine should only be used during pregnancy if the potential benefit outweighs the risks.
- If a patient becomes pregnant or is planning a pregnancy during treatment, they should discuss treatment options with their specialist. Healthcare professional information is available <a href="here">here</a>.

#### **Breastfeeding:**

- There is no published evidence for safety of lisdexamfetamine in breastfeeding. The manufacturers recommend against use, and the UK Drugs in Lactation Service recommend caution.
- Lisdexamfetamine metabolites, including dexamfetamine, are excreted in human milk, therefore a risk to infants cannot be excluded. An individual risk assessment must be made, taking into account the benefit of breastfeeding for the child and the benefit of therapy for the woman.
- If breastfeeding does take place, infants should be monitored for symptoms of CNS stimulation (e.g. decreased appetite/weight gain, sleep disturbances, irritability), although these may be difficult to detect.

Healthcare professional information is available here (USA resource).

**Paternal exposure:** No evidence regarding adverse outcomes following paternal exposure was identified.

#### **Atomoxetine**

#### Pregnancy:

- Atomoxetine is not recommended for use during pregnancy unless a clinical decision is made that the potential benefit outweighs the risk to the foetus
- Evidence on exposure to atomoxetine during pregnancy is too limited to draw firm conclusions
  on adverse outcomes. Clinicians should be aware that patients may have other risk factors which
  independently alter the risks, and additional monitoring should be considered on a case- by-case
  basis. Patients who become pregnant while taking atomoxetine, or who plan a pregnancy, should
  be referred to the specialist team for review.
- As with other centrally acting drugs, there is a potential risk of poor neonatal adaptation syndrome (PNAS)/neonatal withdrawal effects and/or persistent pulmonary hypertension of the newborn (PPHN) in the neonate. Infants exposed to atomoxetine in utero should ideally be delivered in a unit with neonatal support and monitored for symptoms of PNAS.

#### **Breastfeeding:**

- There is no published evidence on the safety of atomoxetine in breastfeeding. Decisions to use atomoxetine while breastfeeding should be made on a case-by-case basis, taking into account the risks to the infant and the benefits of therapy.
- Long half-life in slow metabolisers increases the risk of accumulation in some breastfed infants.
- If breastfeeding does take place, infants should be monitored for symptoms of CNS stimulation (e.g. decreased appetite or slow weight gain, sleep disturbances, gastrointestinal symptoms), although these may be difficult to detect.

Information for healthcare professionals is available here (USA resource).

**Paternal exposure**: No evidence regarding adverse outcomes following paternal exposure was identified.

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT V1.4

# 9. Clinical Monitoring

Once a patient's prescription is taken over by their GP, ongoing monitoring as outlined in the table below will take place in Primary Care.

The Adult ADHD service will offer specialist advice and review any patient whose medication was started in the clinic. The Adult ADHD service can offer an annual review of the patient's ADHD treatment where appropriate.

If there is need for specialist advice / interventions for adult patients who may already have ADHD diagnosis / treatment which was established elsewhere, a new referral to the service will be required.

#### Baseline investigations (to be undertaken by specialist team):

- A medical history and cardiovascular assessment, taking into account conditions that may be contraindications, risk of pregnancy (where applicable), and to ensure the patient meets the criteria for ADHD and that pharmacological treatment is required
- A risk assessment for substance misuse and drug diversion
- Blood pressure (BP) and heart rate
- Height, weight and body mass index (BMI)
- Appetite
- Arrange for electrocardiogram (ECG), only if the patient has any of the following:
  - O History of congenital heart disease or previous cardiac surgery
  - O Sudden death in a first-degree relative under 40 years suggesting a cardiac disease
  - o Shortness of breath on exertion compared with peers
  - o Fainting on exertion or in response to fright or noise
  - o Palpitations
  - o Chest pain suggestive of cardiac origin
  - o Signs of heart failure, heart murmur or hypertension
  - o Current treatment with a medicine that may increase cardiac risk

#### Initial monitoring (to be undertaken by specialist team):

- **Before** every change of dose: assess heart rate, blood pressure, and weight.
- After every change of dose: assess heart rate and blood pressure, and any new or worsening psychiatric symptoms including development or worsening of tic and movement disorders. The specialist should determine the appropriate timing for this monitoring
- Monitor for aggressive behaviour or hostility
- Assessment of symptom improvement. Discontinue if no improvement is observed after one month.

Ongoing monitoring (to be undertaken by primary care team)

Monitoring	Frequency	Additional information
Weight	At least every 6 months	If significant weight loss (persistent, unintentional loss > 5% weight over 6 to 12 months) is

		associated with drug treatment contact the service to consider changing or stopping treatment.  Consider monitoring BMI of adults with ADHD if there has been weight change as a result of their treatment, and changing the medication if weight change persists.
Cardiac function: Pulse and blood pressure	At least every 6 months AND before and after each dose change	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 cardiology/specialist physician.
Seizures	Patient to alert healthcare professional. Assess every 6 months.	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.
Sleep		. Review sleep hygiene. If sleep disturbance associated with drug treatment continues, refer back to specialist.
Psychiatric disorders		Monitor for new or worsening psychiatric and neurological signs or symptoms e.g. tics, anxiety, symptoms of bipolar disorder
Worsening behaviour		Monitor the behavioural response to medication, and if behaviour worsens adjust medication and refer to a psychiatrist to review the diagnosis. If psychotic or severe affective symptoms emerge review and consider discontinuing medication and refer to a psychiatrist for an assessment.
Stimulant diversion	As required, based on the patient's needs and individual circumstances.	Assessment of adherence, and for any indication of lisdexamfetamine abuse, misuse, or diversion. If necessary, discuss with the Adult ADHD/substance misuse specialist team.

#### **Atomoxetine**

- Patient report for dysmenorrhoea, erectile dysfunction and ejaculatory dysfunction
- Patent report for agitation, irritability, suicidal thinking and self-harming behaviour, and unusual changes in behaviour, particularly during the initial months of treatment, or after a dose change.
- Patients should be warned about the potential for: increased agitation, anxiety, suicidal thinking
  and self-harming behaviour especially during the first few weeks of treatment and liver damage
  in rare cases (usually presenting as abdominal pain, unexplained nausea, malaise, darkening of
  the urine or jaundice).

# **10.** Contraindications

For a full list of contraindications, refer to the individual **SmPC**.

**Methylphenidate:** 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; glaucoma, during treatment with MAOI, or within 14 days of discontinuing those drugs, due to the risk of hypertensive crisis; hypersensitivity to methylphenidate or to any of the excipients; Medikinet® XL only: history of pronounced anacidity of the stomach with a pH value above 5.5, or during therapy with H2 receptor blockers, proton pump inhibitors or antacids.

**Dexamfetamine/:** Advanced arteriosclerosis; hyperthyroidism; moderate or severe hypertension; symptomatic cardiovascular disease, concomitant use of MAOI or within 14 days of MAOI treatment (due to the risk of hypertensive crisis), glaucoma; known hypersensitivity to the active substance, any of the excipients, or sympathomimetic amines; phaeochromocytoma; Gilles de la Tourette syndrome or similar dystonias; porphyria; psychiatric disorders including severe depression, schizophrenia, borderline personality disorder and uncontrolled bipolar disorder; suicidal tendencies; anorexia; cerebrovascular disorders; history of drug or alcohol abuse.

**Lisdexamfetamine:** Advanced arteriosclerosis; agitated states; hyperthyroidism; moderate or severe hypertension; symptomatic cardiovascular disease, concomitant use of MAOI or within 14 days of MAOI treatment (due to the risk of hypertensive crisis), glaucoma; known hypersensitivity to the active substance, any of the excipients, or sympathomimetic amines;

**Atomoxetine:** Phaeochromocytoma; severe cardiovascular disease; severe cerebrovascular disease; hypersensitivity to the active substance or to any of the excipients; during treatment with MAOI, or within 14 days of discontinuing those drugs, due to the risk of hypertensive crisis; narrow-angle glaucoma.

# 11. Drug Interactions

For a full list of drug interactions, refer to the individual <u>SmPC</u>.

## Methylphenidate:

- Monoamine oxidase inhibitors (MAOIs): risk of hypertensive crisis. The combination is contraindicated, and the use of methylphenidate and MAOIs should be separated by at least 14 days.
- Coumarin anticoagulants, anticonvulsants (e.g. phenobarbital, phenytoin, primidone), selective
  serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCAs): metabolism may be
  inhibited by methylphenidate. Dose adjustment may be required when starting or stopping
  methylphenidate.
- Anti-hypertensive drugs: effectiveness may be reduced by methylphenidate.
- Other drugs which elevate blood pressure: risk of additive effects (e.g. linezolid).
- Alcohol: may exacerbate adverse CNS effects of methylphenidate.

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT

- **Serotonergic drugs, including SSRIs and MAOIs:** increased risk of CNS adverse effects, risk of serotonin syndrome.
- **Halogenated anaesthetics:** risk of sudden blood pressure increase during surgery. Avoid methylphenidate on the day of planned surgery.
- Dopaminergic drugs, including antipsychotics (e.g. risperidone, paliperidone, selegiline, rasagiline): increased risk of pharmacodynamic interactions including dyskinesias or hypertensive crisis.
- Apraclonidine: effects decreased by methylphenidate.
- Carbamazepine: may decrease methylphenidate levels.
- Ozanimod: may increase risk of hypertensive crisis.

#### Lisdexamfetamine:

- MAOIs and other sympathomimetics (e.g. rasagiline, selegiline, safinamide): additive hypertensive effect. The combination with MAOI is contraindicated, and use of lisdexamfetamine and MAOIs should be separated by at least 14 days.
- **SSRIs (e.g. fluoxetine, paroxetine):** may increase exposure to lisdexamfetamine, risk of serotonin syndrome.
- **Serotonergic drugs, bupropion, tapentadol, tramadol:** Risk of serotonin syndrome.
- Tricyclic antidepressants (TCAs) and nabilone: may increase risk of cardiovascular adverse events.
- Ascorbic acid and other agents and conditions (e.g. thiazide diuretics, diets high in animal protein, diabetes, respiratory acidosis) that acidify urine increase urinary excretion and decrease the half-life of amfetamine.
- Sodium bicarbonate and other agents and conditions (e.g. diets high in fruits and vegetables, urinary tract infections and vomiting) that alkalinise urine decrease urinary excretion and extend the half-life of lisdexamfetamine.
- Antihypertensives, including guanethidine: effects may be reduced by lisdexamfetamine.
- Lithium, phenothiazines, and haloperidol: may reduce the effects of lisdexamfetamine.
- Opioids (including tapentadol and tramadol): analgesic effects may be increased by lisdexamfetamine.
- **Alcohol:** limited data is available, therefore caution is advised as alcohol may exacerbate the CNS side effects of lisdexamfetamine.
- Apraclonidine: effects decreased by lisdexamfetamine.
- **Ritonavir, tipranavir:** may increase exposure to lisdexamfetamine.
- **Safinamide, selegiline, rasagiline:** predicted to increase the risk of severe hypertension when given with lisdexamfetamine.
- Atomoxetine: increased risk of adverse effects.

#### Dexamfetamine:

- MAOIs and other sympathomimetics (e.g. rasagiline, selegiline, safinamide): additive hypertensive effect. The combination with MAOI is contraindicated, and use of dexamfetamine and MAOIs should be separated by at least 14 days.
- **Clonidine** increased duration of action of dexamfetamine, reduced antihypertensive action of clonidine.

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT V1.4

- **Coumarin anticoagulants, anticonvulsants, SSRIs and TCAs:** metabolism may be inhibited by dexamfetamine. Dose adjustment may be required when starting or stopping dexamfetamine.
- **SSRIs (e.g. fluoxetine, paroxetine):** may increase exposure to dexamfetamine. Risk of serotonin syndrome.
- Serotonergic drugs, bupropion, tapentadol, tramadol: Risk of serotonin syndrome.
- TCAs and nabilone: may increase risk of cardiovascular adverse events.
- Anticonvulsants (e.g. phenobarbital, phenytoin, primidone): Metabolism may be inhibited and absorption may be delayed by dexamfetamine. Dose adjustment may be required when stopping or starting dexamfetamine.
- Antacids (e.g. sodium bicarbonate) and urinary alkalinizing agents (e.g. acetazolamide, some thiazides): may increase exposure to dexamfetamine.
- Gastrointestinal acidifying agents (e.g. ascorbic acid, fruit juices) and urinary acidifying agents (e.g. ammonium chloride, sodium acid phosphate): may reduce exposure to dexamfetamine
- Antihistamines: sedative effect may be counteracted.
- Antihypertensives, including guanethidine: effects may be reduced by dexamfetamine.
- Beta-blockers (e.g. propranolol): risk of severe hypertonia. May reduce effects of dexamfetamine.
- Lithium, phenothiazines, and haloperidol: may reduce the effects of dexamfetamine.
- **Disulfiram:** may inhibit metabolism and excretion of dexamfetamine.
- **Opioids:** analgesic effects may be increased and the depressant effects (e.g. respiratory depression) may be decreased by dexamfetamine.
- **Halogenated anaesthetics:** risk of sudden blood pressure increase during surgery. Avoid dexamfetamine on the day of planned surgery.
- Cytochrome P450 (CYP450) substrates, inducers or inhibitors: use with caution; role of CYP450 in dexamfetamine metabolism is not known.
- Alcohol: may exacerbate adverse CNS effects of dexamfetamine.
- Apraclonidine: effects decreased by dexamfetamine.
- **Ritonavir, tipranavir:** may increase exposure to dexamfetamine.
- **Safinamide, selegiline, rasagiline:** predicted to increase the risk of severe hypertension when given with dexamfetamine.

#### Atomoxetine:

- MAOIs: avoid atomoxetine use whilst using MAOIs and for a minimum of 14 days after stopping MAOIs. Increased risk of adverse effects.
- CYP2D6 inhibitors e.g. SSRIs, quinidine, terbinafine, bupropion, cinacalcet, dacomitinib, and panobinostat: increased atomoxetine exposure. Slower dose titration and lower final dose may be necessary. Clinical response and tolerability should be re-evaluated if a CYP2D6 inhibitor is started or stopped.
- Potent inhibitors of other cytochrome P450 isoforms in patients who are poor CYP2D6
  metabolisers. It is not clear whether there is a clinically significant increase in atomoxetine
  exposure in this patient group.
- Beta-2 agonists, including salbutamol: high doses may potentiate cardiovascular effects.

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by C&I MH FT V1.4

- Drugs which prolong the QT interval e.g. antipsychotics, class IA and III anti-arrhythmics, some antibiotics such as ciprofloxacin or erythromycin, methadone, mefloquine, TCAs, lithium, and some SSRIs such as citalopram: risk of QT interval prolongation.
- **Drugs which cause electrolyte imbalance e.g. thiazide diuretics:** risk of QT interval prolongation.
- Drugs which lower the seizure threshold e.g. tricyclic antidepressants, SSRIs, antipsychotics, phenothiazines, mefloquine, chloroquine, bupropion, and tramadol: risk of seizures. Use with caution when stopping medications that may induce seizures on withdrawal, such as benzodiazepines.
- **Antihypertensive drugs:** effectiveness of anti-hypertensives may be decreased, monitoring is required.
- **Drugs that increase blood pressure:** possible additive effects, monitoring is required.
- Drugs that affect noradrenaline e.g. dexamfetamine, lisdexamfetamine, imipramine, venlafaxine, mirtazapine, pseudoephedrine, phenylephrine: possible additive or synergistic pharmacological effects.

# 12. References

- 1. NICE guideline [NG87] 87; Attention Deficit Hyperactivity Disorder: diagnosis and management; March 2018. Last updated: 13 September 2019 <a href="https://www.nice.org.uk/guidance/ng87">https://www.nice.org.uk/guidance/ng87</a>. Accessed on 07/05/2024.
- 2.BNF https://bnf.nice.org.uk/ last updated: 23 November 2022.
- 3. Summary of Product Characteristics <a href="http://www.medicines.org.uk">http://www.medicines.org.uk</a>. Accessed on 07/05/2024.
- 4. Camden & Islington NHS Foundation Trust, shared care guidelines for methylphenidate, dexamfetamine and atomoxetine for ADHD in adults, PHA43, July 2015
- 5. Barnet, Enfield and Haringey Mental Health Trust shared care guidelines for methylphenidate, dexamfetamine and atomoxetine for ADHD in adults, 2010 (Reviewed 2015)
- 6. MHRA. Drug Safety Update. Methylphenidate long-acting (modified-release) preparations: caution if switching between products due to differences in formulations, September 2022. Available at: <a href="https://www.gov.uk/drug-safety-update/methylphenidate-long-acting-modified-release-preparations-caution-if-switching-between-products-due-to-differences-in-formulations.">https://www.gov.uk/drug-safety-update/methylphenidate-long-acting-modified-release-preparations-caution-if-switching-between-products-due-to-differences-in-formulations.</a> Accessed on 07/05/2024.
- 7. NHS England,, National shared care protocol: Methylphenidate in adult services, July 2022, Version 1, Review date January 2025 Available at: <a href="https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/">https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/</a>. Accessed on 07/05/2024.
- 8. NHS England, National shared care protocol: Lisdexamfetamine for patients within adult services, July 2022, Version 1, Review date January 2025 Available at: <a href="https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/">https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/</a>. Accessed on 07/05/2024.
- 9. NHS England, National shared care protocol: National shared care protocol: Dexamfetamine for patients within adult services, July 2022, Version 1, Review date January 2025 Available at: <a href="https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/">https://www.england.nhs.uk/medicines-2/regional-medicines-optimisation-committees-advice/shared-care-protocols/</a>. Accessed on 07/05/2024.
- 10. NHS England, National shared care protocol Atomoxetine for patients within adult services, July 2022, Version 1, Review date January 2025 Available at: <a href="https://www.england.nhs.uk/medicines-">https://www.england.nhs.uk/medicines-</a>

- 11. UKTIS. Use of methylphenidate in pregnancy. Last updated November 2023. Accessed via <a href="https://uktis.org/monographs/use-of-methylphenidate-in-pregnancy/">https://uktis.org/monographs/use-of-methylphenidate-in-pregnancy/</a>. Accessed on 07/05/2024.
- 12. UKTIS. Use of atomoxetine in pregnancy. Last updated March 2023. Accessed via <a href="https://uktis.org/monographs/use-of-atomoxetine-in-pregnancy/">https://uktis.org/monographs/use-of-atomoxetine-in-pregnancy/</a>. Accessed on 07/05/2024

# Associated documents

- 1. Adult ADHD: Additional information for prescribing in adults in primary care the document has been endorsed by C&I and BEH Mental Health Trust DTCs, and has been created to provide additional information to GPs when they consider requests to continue prescriptions for adult patients receiving stable doses for whom treatment was started by ADHD specialists working outside the NCL commissioned services (e.g., private organisations or overseas specialists).
- 2. ADHD: Patients right to choose care provider
- 3. NCL Prescribing Dilemmas a guide for primary care prescribers (note: you must register with the NCL GP website and access via the NHS Secure Network to view this page for documents 1 and 3).

#### **Patient information:**

- Royal College of Psychiatrists ADHD in adults.
- NHS Attention deficit hyperactivity disorder.
- Choice and Medication: Camden and Islington MH FT:
  - bumps best use of medicine in pregnancy

#### **Contact Details**

#### **Camden & Islington NHS Foundation Trust**

Adult ADHD Clinic	Tel: 0203 317 7356
St Pancras Hospital	adult.adhd@candi.nhs.uk
Neurodevelopmental Service (Adult ADHD	
and Adult ASD)	
London, NW1 0PE	
Highgate Mental Health Centre, Pharmacy	Tel: 020 7561 4103
Department	

# Barnet, Enfield and Haringey Mental Health NHS Trust

Adult ADHD Clinic	Tel: 020 8702 5544	
Barnet Service Line		
Barnet, Enfield and Haringey Mental Health		
NHS Trust		
Springwell Centre   Barnet Hospital		
Wellhouse Lane, Barnet   EN5 3DJ		

North Central London Joint Formulary Committee
Shared Care: Methylphenidate (immediate release and long-acting),

Atomoxetine, Dexamfetamine and Lisdexamfetamine

Produced by C&I MH FT

V1.4

Approval date: TBC Review date: TBC

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# **National Hospital for Neurology and Neurosurgery**

The National Tourette's Syndrome Service	Tel: 0203 448 3524
Box 19, The National Hospital for Neurology	
and Neurosurgery	
Queen Square	
London WC1N 3BG	

# North London Partners Specialist Perinatal Mental Health Service

East Team (Enfield & Haringey): Forest Road
Primary Care Centre, Ground Floor, 308A

Hertford Road, London, N9 7HD

NCL.perinatal@candi.nhs.uk

West Team (Barnet): Cedar Place, North London Partners NHS, 890 High Road, North Finchley, N12 9RH

South Team (Camden and Islington): Bloomsbury Building or 3rd floor East wing, St Pancras Hospital, London, NW1 OPE Tel: 020 3317 7198

Tel: 020 3317 7001

Tel: 020 3317 7114

This document represents only a brief summary and is as accurate as possible. Always refer to the Adult ADHD Clinic for further information.

## **Document control**

Date	Version	Amendments
Mar 2018	V1	Share Care produced by Camden & Islington MH Trust and Barnet, Enfield & Haringey MH Trust
Jun 2018	V1.1	Replaced "CIFT MEH" with "C&I FT" (approved by Share Care Group Chair)
Mar 2019	V1.2	Monitoring section updated following NICE guidance
		Order of medications changed as lisdexamfetamine now considered first-line choice of therapy
		Tourette's clinic information added (as they review and prescribe medications for ADHD patients)
Sep 2020	V1.3	Updated to reflect licensing status of methylphenidate MR products
Jul 2024	V1.4	Routine update led by Camden and Islington MH trust supported by NHS North Central London Integrated Care Board (NCL ICB):
		Update of: Template V1.4; Dose and administration; cautions; contraindications; interactions; adverse effects; baseline investigations; dose and administration; Specialist, patient and GP responsibilities; contact details
		Addition of:
		Pregnancy, paternal exposure and breastfeeding information; guanfacine, combination, and other treatments; CAMHS transition to Adult services;
		MHRA. Drug Safety Update. Methylphenidate long-acting (modified-release) preparations: caution if switching between products due to differences in formulations; Adult ADHD: Additional information for prescribing in adults in primary care; ADHD: Patients right to choose care provider; 3. NCL Prescribing Dilemmas – a guide for primary care prescribers.
		Reference to check for supply chain information about ADHD medicines.

With thanks to the ADHD shared care working group:

David Rogalski, Lead Pharmacist, C&I and Lead Author

E.Y. Cheung, Head of Medicines Quality and Improvement, Medicines Optimisation Team, NHS North Central London ICB.

Jyoti Gupta, Senior Prescribing Adviser, Planning and Operations, Medicines Optimisation Team, NHS North Central London ICB.

Groups / Individuals who have overseen the development of this guidance:	NLMHP Clinical Team NCL ICB Medicines Optimisation team JFC Support Pharmacists	
Groups consulted and have given approval:	NCL Shared Care Group	
File name:	Adult ADHD Shared Care Guideline	
Version number:	V1.4	
Available on:	https://nclhealthandcare.org.uk/our-workingareas/medicines- optimisation/shared-care-guidelinesand-factsheets/	
Disseminated to:	Formulary Pharmacists and Commissioners	
Equality impact assessment:	Nil identified	
NCL Shared Care Group Approval date:	18/07/2024	
Review date:	18/07/2027	

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting),

Atomoxetine, Dexamfetamine and Lisdexamfetamine

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V1.4

25 of 28

# Appendix 1: transfer form: from [Trust] to GP practice

# Section A: to be completed by secondary care Send to practice

This document is to request the shared care pathway of your patient and comprises an agreement betwee the GP and named Specialist .

Fix address label here (ensure NHS no.on)		Clinic	stamp or give details below
Department			
Clinic phone			
Consultant		Email	
Indication for prescription			
Drug prescribed			
Date	Drug started	Cur	rrent dose
Relevant conditions			
Monitoring variations			

North Central London Joint Formulary Committee Shared Care: Methylphenidate (immediate release and long-acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine Produced by NLMHP V1.4

# Section B: [Accept Shared Care] to be completed by practice Send back FAO referring consultant above

The above patient has been accepted into our monitoring service.

			Practice stamp
	•	•	
Signed /			
Signed / Designation			
Date			

# Section B: [Reject Shared Care] to be completed by practice Send back FAO referring consultant above

The above patient has not been accepted into our monitoring service.

Reason	Practice stamp
Signed /	
Designation	
	7
Date	