



**PAN MERSEY AREA PRESCRIBING COMMITTEE
SHARED CARE FRAMEWORK
REF: SC14 FINAL
APC BOARD DATE: 30 NOV 2016**



LISDEXAMFETAMINE ▼

<p>1. Background</p>	<p><u>Attention Deficit Hyperactivity Disorder (ADHD)</u> Attention deficit hyperactivity disorder (ADHD) is a chronic, neurodevelopmental disorder associated with inattention, hyperactivity and impulsiveness.</p> <p>The National Institute for Health and Clinical Excellence (NICE) issued a clinical guideline, Attention Deficit Hyperactivity Disorder: diagnosis and management (NG87) in 2018. This document advises that treatment for ADHD should only be initiated by a healthcare professional with expertise in ADHD and should be based on a comprehensive assessment and diagnosis. Continued prescribing and monitoring of drug therapy may be performed by the primary care clinicians, under shared care arrangements.</p> <p>Methylphenidate, atomoxetine, dexamfetamine, lisdexamfetamine and guanfacine are recommended within their licensed indications, as options for the management of ADHD. Some prescribing of ADHD medication is 'off-label' but clearly supported by the NICE guideline, British National Formulary (BNF) and BNF for Children.</p> <p>Symptoms of ADHD can persist into adulthood in about two thirds of all patients. For patients transitioning into adulthood, specialists should ensure appropriate arrangements are made for referral into adult services. In such circumstances a new shared care agreement will need to be made between the primary care clinician and the new secondary care provider.</p>
<p>2. Mode of Action</p>	<p>Lisdexamfetamine is a pro-drug of the stimulant dexamfetamine. The mode of action of amfetamines in ADHD is not fully established. However, its actions are thought to be due to its ability to block the reuptake of noradrenaline and dopamine into the presynaptic neuron and increase the release of these monoamines into the extraneuronal space.</p>
<p>3. Licensed Indications</p>	<p>Lisdexamfetamine is indicated as part of a comprehensive treatment programme for attention deficit hyperactivity disorder in children and adolescents aged 6 years and over when response to previous methylphenidate treatment is considered clinically inadequate.</p> <p>Lisdexamfetamine is also indicated as part of a comprehensive treatment programme for attention deficit/hyperactivity disorder (ADHD) in adults.</p> <p>Treatment must be under the supervision of an appropriate specialist in childhood, adolescent and/or adult behavioural disorders.</p>
<p>4. Locally agreed off label indications</p>	<p>Not applicable</p>

5. Contraindications	<p><i>(Please note this does not replace the Summary of Product Characteristics (SPC) and should be read in conjunction with it. Refer to the manufacturers SPC for complete up-to-date list.)</i></p> <ul style="list-style-type: none"> • Hypersensitivity to sympathomimetic amines or any of the excipients • Concomitant use of monoamine oxidase inhibitors (MAOI) or within 14 days after MAOI treatment • Hyperthyroidism or thyrotoxicosis • Agitated states • Symptomatic cardiovascular disease • Advanced arteriosclerosis • Moderate to severe hypertension • Glaucoma <p>Link to SPC</p>	
6. Pharmaceutical aspects <i>(including route of administration, formulation, method of administration, legal category)</i>	Route of Administration	Oral
	Formulation	Hard capsules containing 20 mg, 30 mg, 40 mg, 50 mg, 60 mg and 70 mg of lisdexamfetamine dimesylate
	Method of administration	<p>Lisdexamfetamine may be taken with or without food.</p> <p>Lisdexamfetamine capsules may be swallowed whole or the capsule opened and the entire contents emptied and mixed with a soft food such as yogurt or in a glass of water or orange juice. If the contents include any compacted powder, a spoon may be used to break apart the powder in the soft food or liquid. Capsule contents should be stirred until completely dispersed and the entire mixture of soft food or liquid consumed immediately; it should not be stored.</p> <p>In the event of a missed dose, dosing can resume the next day. Afternoon doses should be avoided because of the potential for insomnia.</p>
	Other important information	<p>Lisdexamfetamine should be withdrawn slowly to avoid inducing depression or renewed hyperactivity.</p> <p>Alcohol may exacerbate the CNS adverse effects of lisdexamfetamine. It is advisable for patients to abstain from alcohol during treatment</p> <p>Consistent with other stimulants, the potential for abuse, misuse or diversion of lisdexamfetamine should be considered prior to prescribing.</p>
	Legal Category	<p>Lisdexamfetamine is a schedule 2 controlled drug and prescriptions must comply with full legal requirements for the prescribing and supply of controlled drugs.</p> <p>NICE NG46 recommends prescribing enough of a controlled drug to meet the person's clinical needs for no more than 30 days, unless there are exceptional circumstances.</p>
7. Specialist Initiation and Titration	<p>Attention Deficit Hyperactivity Disorder</p> <p>Dosage should be individualised according to the therapeutic needs and response of the patient.</p> <p>The starting dose is 30 mg taken once daily in the morning. When in the judgment of the clinician a lower initial dose is appropriate, patients may begin treatment</p>	

	<p>with 20 mg once daily in the morning. The dose may be increased by 10 mg or 20 mg increments, at approximately weekly intervals. The maximum recommended dose is 70 mg/day.</p> <p>Dose adjustments may be necessary in severe renal insufficiency and the maximum dose should not exceed 50mg/day.</p> <p>In order to optimise drug treatment, the initial dose should be titrated against symptoms and side effects over 4–6 weeks. [NICE CG72] Doses should be gradually increased until there is no further clinical improvement in ADHD (that is, symptom reduction, behaviour change, improvements in education and/or relationships) and side effects are tolerable.</p> <p>Treatment should be discontinued if there is no response after 1 month of maximum tolerated dose.</p> <p>Shared Care may only be commenced following specialist initiation, stabilisation and review of treatment. In addition, formal agreement must have been received from the primary care prescriber.</p>	
<p>8. Dosage regimen for continued prescribing in Primary Care</p>	<p>Following initiation and stabilisation continue prescribing and monitoring as advised by the specialist in accordance with the shared care agreement.</p>	
	<p>Duration of treatment <i>To be determined by the specialist based on clinical response and tolerability.</i></p>	<p>Following an adequate treatment response, lisdexamfetamine should be continued for as long as it remains clinically effective. This should be reviewed at least annually by the ADHD specialist</p> <p>Trial periods off medication (drug holiday) to assess the patient's condition without treatment may be deemed appropriate by the ADHD specialist; this will be undertaken and supervised by the specialist who will advise the patient and GP of the outcome</p>
	<p>Termination of treatment</p>	<p>This will be carried out by the specialist</p>
	<p>NB. All dose adjustments will be the responsibility of the initiating specialist unless directions have been discussed and agreed with the GP.</p>	
<p>9. Significant Drug Interactions</p> <p><i>For a comprehensive list consult the BNF or Summary of Product Characteristics</i></p>	<p>Seek advice from the initiating specialist if any of the following drugs are co-prescribed.</p> <p>Note: Lisdexamfetamine is an amphetamine and a prodrug of dexamfetamine</p> <p>Antidepressants: Risk of cardiovascular, serotonin syndrome and other side effects</p> <p>MAOIs: Contraindicated, risk of hypertensive crisis.</p> <p>Antihypertensive medication: Possible decrease in antihypertensive effectiveness.</p> <p>Lithium attenuates the effects of amfetamines</p> <p>Disulfiram: Possible inhibition of metabolism and excretion of amfetamines</p> <p>Antiepileptic drugs: Ethosuximide, phenobarbital and phenytoin absorption is delayed by amfetamines.</p> <p>Antipsychotics: Possible decrease in effectiveness of lisdexamfetamine and increase of side effects of antipsychotics.</p> <p>Opioids: Amfetamines potentiate the analgesic effect of narcotic analgesics.</p> <p>Clonidine increased duration of the action of dexamfetamine.</p> <p>Anticoagulants – Stimulants possibly enhance the effects of anticoagulants</p>	

	<p>HIV-protease inhibitors concurrent use with amfetamines increases the concentration of amfetamines and is potentially fatal. Avoidance or dose reduction is advised.</p> <p>The urinary excretion of amfetamines is increased by urinary acidifiers and reduced by urinary alkalinisers.</p> <p>Gastrointestinal acidifying agents (guanethidine, reserpine, glutamic acid HCl, ascorbic acid, fruit juices etc) lower the absorption of amfetamines.</p>
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<p>10. Adverse drug reactions</p> <p><i>For a comprehensive list consult the BNF or Summary of Product Characteristics</i></p>	<p>The most common adverse effects include:</p> <ul style="list-style-type: none"> • Metabolic effects such as weight loss and growth restriction. In children, slow weight gain and a reduction in attained height and suppression of growth during prolonged use. • Psychiatric effects such as insomnia, agitation, aggression, anxiety, labile affect, tics, mood swings, and depression. • Central nervous system effects such as dizziness, sleep disturbances, dyskinesia, psychomotor hyperactivity, irritability, and headache. • Cardiovascular system effects such as increased blood pressure, tachycardia, palpitations and cardiomyopathy. • Gastrointestinal effects such as dry mouth, diarrhoea, constipation, abdominal cramps, nausea and vomiting and decreased appetite. • Urogenital effects such as sexual dysfunction. • Respiration disorders such as dyspnoea • Ophthalmological effects such as blurred vision, mydriasis. • Other disorders such as pyrexia, fatigue <p><u>In children</u>, parents/patients will have been advised by the ADHD specialist to report any suspected side effects directly to them. GPs should refer any patients with suspected side effects to the ADHD specialist irrespective of the advice in the following table.</p>
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Adverse drug reactions <i>- continued</i>	Adverse event <i>System – symptom/sign</i>	Action to be taken and by whom
	Sustained resting tachycardia, severe chest pain, dyspnoea and unexplained syncope or other symptoms suggestive of cardiac disease.	Discontinue treatment. Seek prompt cardiac specialist advice and notify the initiating specialist team
	Clinically significant increases in blood pressure, arrhythmia.	Exclude other causes and seek ADHD specialist advice. Dose reduction may be appropriate.
	Reduced weight and growth retardation.	Continue treatment. Provide advice on healthy diet. The patient should be advised to consider taking additional meals or snacks early in the morning or late in the evening when the effects of the drug have worn off. Refer to a dietician if appropriate. If weight loss becomes a concern, seek ADHD specialist advice.
	Increase in seizure frequency or new-onset seizures.	Refer to the initiating specialist team. Discontinuation or switching of treatment may be appropriate.
	Development or worsening of psychiatric disorders including psychotic or manic symptoms, aggressive or hostile behaviour, anxiety, agitation, motor or vocal tics and suicidal ideation.	Refer to the initiating specialist team. Depending on symptoms, discontinuation of treatment, dose reduction or switching may be considered by the ADHD specialist

	Central nervous system effects such as dizziness, dyskinesia, psychomotor hyperactivity, headache.	Usually temporary. If persisting, refer to ADHD specialist. Dose reduction or discontinuation of treatment may be appropriate.
	Severe blood, kidney and liver and skin disorders.	Exclude other causes. Repeat blood tests for confirmation. Seek ADHD specialist advice if the adverse effect is secondary to the drug. Discontinuation of treatment may be considered.
	Glaucoma or other severe visual disturbances.	Seek ophthalmological advice and notify the ADHD specialist Team. Discontinuation of treatment may be considered by the ADHD specialist.
	Diarrhoea, abdominal cramps, nausea, vomiting	Continue treatment. May be alleviated by administering medication with food. Exclude other causes. Seek ADHD specialist advice if symptoms become severe. Dose reduction or discontinuation of treatment may be considered.
	Insomnia	Usually transient. Continue treatment. Provide sleep hygiene advice. Timing of doses may need to be adjusted with ADHD specialist advice.
	WARNINGS: Lisdexamfetamine can cause dizziness, drowsiness and visual disturbances. These can impair a patient's ability to drive safely. This medicine is in the list of drugs included in regulation under 5a of the Road Traffic Act 1988. It is an offence to drive while under the influence of this medicine.	
	Lisdexamfetamine is a black triangle drug. Any suspected adverse reaction to lisdexamfetamine should be reported to the MHRA via the "Yellow Card" scheme on http://yellowcard.mhra.gov.uk/	
11.Advice to patient/carers	<p>The patient should be advised to report any of the following signs or symptoms to their GP without delay:</p> <p style="padding-left: 40px;">Symptoms suggestive of cardiac or psychiatric disorders or seizures.</p> <p>It is advisable for patients to abstain from alcohol during treatment. Alcohol can worsen the side effects of lisdexamfetamine.</p> <p>In children, parents/patients will have been advised by the ADHD specialist to report the above signs or symptoms directly to them.</p>	
12.Pregnancy and breast-feeding	Seek specialist advice for prescribing decision.	
13.Baseline investigations to be undertaken by the specialist centre	<ul style="list-style-type: none"> • A comprehensive history of concomitant medications • Full mental health and social assessment • Full medical history and physical examination including <ul style="list-style-type: none"> - Assessment of history of exercise syncope, undue breathlessness and other cardiovascular symptoms - Family history of cardiac disease and examination of the cardiovascular system. - Pregnancy or breastfeeding • Monitor and Record <ul style="list-style-type: none"> - Heart rate and blood pressure - Weight (in adults); height and weight plotted on a growth chart (in children and adolescents); repeat following each dose adjustment and at 3 months and 6 months after treatment has started - An ECG if there is past medical or family history of serious cardiac disease, a history of sudden death in young family members or abnormal findings on cardiac examination. <p>Risk assessment for substance misuse and drug diversion (where the drug is passed on to others for non-prescription use).</p>	

	Monitoring	Frequency
14.Ongoing monitoring requirements to be undertaken by the specialist team and Primary Care	Blood pressure and pulse (appropriate for age, using information supplied in attached request letter – children & adolescents only)	At every adjustment of dose or visit and then at every 6 months Primary care – every 6 months
	Weight (in adults); Height and weight (in children and adolescents), and appetite	At every adjustment of dose or visit or at least every 6 months Primary care – every 6 months Weight every 3 months in children 10 years and under
	Compliance. Indication of abuse, misuse or diversion of lisdexamfetamine	Every 6 months
	Side effects	Every 6 months
	Clinical need, benefits, side effects	Annual review by Specialist
	Refer to ' <i>Adverse Drug Reactions</i> ' section for advice and actions to be taken.	
	15.Specialist contact information	If stopping medication or needing advice , please refer to the shared care agreement (Appendix 2)
16.Additional information	Where patient care is transferred from one specialist service or GP practice to another, a new shared care agreement must be completed.	
17.References	<ol style="list-style-type: none"> 1. Summaries of product characteristics for lisdexamfetamine 2. NICE guidelines (NG87) in March 2018: Attention deficit hyperactivity disorder: diagnosis and management 3. NICE CKS - ADHD 4. British National Formulary 5. British National Formulary for Children 	
18.To be read in conjunction with the following documents	Shared Care Policy (appendix 1) Shared Care Agreement (appendix 2)	

Appendix 1 Policy for Shared Care

Shared care is only appropriate if it provides an optimum solution for the patient and it meets the criteria outlined in the Shared Care section of the Pan Mersey **Definitions and Criteria for Categorisation of Medicines in the Pan Mersey Formulary** document.

Before prescribing responsibilities are transferred to primary care:

- Prescribing responsibility will only be transferred when the consultant and the patient's GP agree that the patient's condition is stable.
- All information required by the shared care framework for the individual medicine has been provided to the patient's GP.
- Patients will only be referred to the GP once the GP has agreed to the Shared Care Agreement and returned signed copies.

Inherent in any shared care agreement is the understanding that participation is at the discretion of the GP, subject to the availability of sufficient information to support clinical confidence.

Specialist Responsibilities in Shared Care

- To initiate the medicine, prescribing and monitoring toxicity and efficacy as required until the patient is stabilised and reviewed as described by the shared care framework.
- To ensure the patient or their carer is counselled with regard to the medicine.
- To provide any necessary written information to the patient with regard to the individual medicine.
- To be familiar with the shared care framework.
- To provide all information to the patients GP as required by the shared care framework when prescribing responsibility is initially transferred and at any subsequent times as necessary for safe and effective treatment of the patient.
- To assess the patient regularly as necessary for the duration of therapy as specified in the individual medicine shared care framework.
- To review the patient promptly if required by the GP concerned.
- To meet any additional requirements as required by the individual medicine shared care framework.
- To communicate failure of a patient to attend a routine hospital review and advise the GP of appropriate action to be taken.
- Following the addition of a new drug to an existing regime covered by a Shared Care Agreement, the Specialist must recall the patient for re-titration, stabilisation

and subsequent review and inform the GP of this. A new Shared Care Agreement must then be initiated.

Primary Care Responsibilities in Shared Care

- To reply to a written request for Shared Care within 21 days ensuring both copies of the Shared Care Agreement are signed if appropriate.

If agreeing to shared care, the GP is asked to:

- To provide prescribe or manage and monitor the medicine as advised by the Specialist and in line with the individual Shared Care Framework.
- To review the patient as required by the Shared Care Framework
- To make appropriate and contemporaneous records of prescribing and/or monitoring and to note the existence of the Shared Care Agreement on the patient`s clinical record. A READ code of “6652 Shared Care- Specialist/GP” can be used.
- To be familiar with the individual Shared Care Framework.
- To monitor patient`s general wellbeing.
- To report any adverse effects of treatment to the consultant
- To inform the Specialist of any relevant change in the patient`s circumstances.
- To seek Specialist advice as appropriate.
- To meet any additional requirements as required by the individual Shared Care Framework.
- To respond to Specialist communication relating to any change or addition to the patients treatment covered by the Shared Care Agreement.

Appendix 2: Shared Care Agreement

Request by Specialist Clinician for the patient’s GP to enter into a shared care agreement

Part 1

To be signed by Consultant / Prescribing Member of Specialist Team

Date _____

Name of patient _____

Address _____

Patient NHS No _____

Patient hospital unit No _____

Diagnosed condition _____

If using addressograph label please attach one to each copy

Dear Dr _____

I request that you prescribe

(1) _____

(2) _____

for the above patient in accordance with the enclosed shared care framework.

Last Prescription Issued: / / Next Supply Due: / /

I confirm that the patient has been stabilised and reviewed on the above regime in accordance with the Shared Care Framework and Policy.

I confirm that if this is a Shared Care Agreement for a drug indication which is unlicensed or off label, informed consent has been received.

Details of Specialist Clinicians

Name _____ Date _____

*Consultant / Prescribing Member of Specialist Team *circle or delete as appropriate*

Signature _____

In all cases, please also provide the name and contact details of the Consultant.

When the request for shared care is made by a prescriber who is not the consultant, it is the supervising consultant who takes medico-legal responsibility for the agreement.

Consultant: _____

Contact details:

Telephone number: _____ Ext: _____

Address for return
of documentation _____

Part 2

To be completed by Primary Care Clinician

I agree to prescribe _____ for the above

patient in accordance with the enclosed shared care framework.

GP signature _____ Date _____

GP name _____ Please print

GP: Please sign and return a copy ***within 21 calendar days*** to the address above

OR

GP- If you do not agree to prescribe, please delete the section above and provide any supporting information as appropriate below: