NHS

South Sefton Clinical Commissioning Group
Southport and Formby Clinical Commissioning Group

Shared Care Framework for

Dexamfetamine the treatment of ADHD in adults

Date approved by Joint Medicines Operational Group 5/10/2018

1. Background	Attention deficit hyperactivity disorder (ADHD) is a chronic, neurodevelopmental disorder associated with inattention, hyperactivity and impulsiveness. In about two thirds of all patient's symptoms of ADHD can persist into adulthood. NICE recommend that treatment for ADHD should 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 can be performed by the primary care clinicians, under shared care arrangements.
2. Licensed Indications	Dexamfetamine is indicated as part of a comprehensive treatment programme for ADHD in children and adolescents aged 6 to 17 when response to previous to methylphenidate treatment is considered clinically inadequate.
3. Locally agreed off-label indications	Treatment of adults with refractory ADHD
4. Specialist Initiation and dose titration	Refractory ADHD: Adults: Initially 5mg twice daily, dose is increased at weekly intervals according to response, maintenance dose to be given in 2-4 divided doses; maximum 60mg* per day. • The dose should be titrated against symptoms and side effects over 4-6 weeks • Treatment should be discontinued if there is no response after 1 month of maximum tolerated dose. • All dose adjustments will be the responsibility of the initiating specialist unless directions have been discussed and agreed with the primary care clinician **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**.
5. **Baseline investigations, initial monitoring and dose titration to be undertaken by the specialist.**	**Baseline Investigations**: • A comprehensive history of concomitant medications • Full mental health and social assessment • Full medical history and physical examination including: - assessment of history of exercise, syncope, undue breathlessness and other cardiovascular symptoms - Heart rate and blood pressure plotted on a centile chart - Weight - Family history of cardiac disease - Examination of t h e cardiovascular system.

<table>
<tr><td></td><td colspan="2">- Pregnancy or breastfeeding status
• An ECG if there is past medical or family history of serious cardiac disease, a history of sudden death in young family members or abnormal findings on cardiac examination.
• Risk assessment for substance misuse and drug diversion.

Ongoing monitoring by specialist:

• To optimise drug treatment, the initial dose should be titrated against symptoms and side effects over 4–6 weeks. Doses are gradually increased until there is no further clinical improvement in ADHD symptoms (behaviour change, improvements in education and or relationships) and side effects are tolerable
• Blood pressure and pulse every 6 months or at each visit and after every dose adjustment.
• Clinical need, benefit and side effects should be reviewed annually. Dexamfetamine should be continued for as long as remains clinically effective.
• Weight 3 months after starting treatment then every 6 months and at visit and at each dose adjustment.
• Treatment should be discontinued if there is no response after 1 month of maximum tolerated dose.

Duration of treatment to be determined by the specialist based on clinical response and tolerability.

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

Termination of treatment will be carried out by the specialist</td></tr>
<tr><td>6. Ongoing monitoring requirements to be undertaken by Primary Care.</td><td colspan="2">Following initiation and stabilisation continue prescribing and monitoring as advised by the specialist in accordance with the shared care agreement.

<table><tr><th>Monitoring</th><th>Frequency</th></tr><tr><td>Blood pressure and pulse</td><td>Every 6 months</td></tr><tr><td>Weight</td><td rowspan="3">Every 6 months</td></tr><tr><td>Compliance check including checking for any signs of diversion</td></tr><tr><td>Side effects</td></tr></table></td></tr>
<tr><td>7. Pharmaceutical aspects
(including route of administration, formulation, method of administration, legal category)</td><td>Route of administration</td><td>Oral</td></tr>
<tr><td></td><td>Formulation</td><td>Dexamfetamine 5 mg Tablets
Dexamfetamine 1 mg/ml Oral Solution

This should be in line with the commissioner's recommendation</td></tr>
<tr><td></td><td>Method of administration</td><td>Dexamfetamine should be taken at the same times on each day, relative to the</td></tr>
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		time of meals, preferably with or immediately after meals Dexamfetamine tablets are scored and can be split along the score line(s)
	Other important information	Dexamfetamine should be withdrawn slowly to avoid inducing depression or rebound hyperactivity Alcohol may exacerbate the CNS adverse effects of dexamfetamine. It is advisable for patients to abstain from alcohol during treatment Caution should be exercised when prescribing dexamfetamine to those likely to be at risk of stimulant misuse or diversion
	Legal Category	Dexamfetamine is a **Schedule 2 Controlled Drug** and prescriptions must comply with full legal requirements for the prescribing and supply of controlled drugs. 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.
8. Contraindications *(Please note this does not replace the Summary of Product Characteristics (SPC) and should be read in conjunction with it.)*	▾ Hypersensitivity to dexamfetamine or other amfetamine derivatives or any of the excipients. ▾ Patients with symptomatic cardiovascular disease, structural cardiac abnormalities and/or moderate or severe hypertensive disease. ▾ Patients with cerebrovascular disorders (cerebral aneurysm, vascular abnormalities including vasculitis or stroke) ▾ Patients with advanced arteriosclerosis. ▾ During or for 14 days after treatment with an MAO inhibitor. ▾ Patients with a history of drug abuse or alcohol abuse. ▾ Patients with hyperthyroidism, phaeochromocytoma, glaucoma, porphyria or hyperexcitability. ▾ Patients with Gilles de la Tourette syndrome or similar dystonias. ▾ Severe psychiatric comorbidities (that are not well-controlled)	
9. Significant Drug Interactions *(For a comprehensive list consult the BNF or Summary of Product Characteristics)*	Seek advice from the initiating specialist if any of the following drugs are co-prescribed: ▾ **Antidepressants** Risk of cardiovascular, serotonin syndrome and other side effects ▾ **MAOIs**: Contraindicated; risk of hypertensive crisis. ▾ **Antihypertensive medication**. Possible decrease in antihypertensive effectiveness. ▾ **Lithium** attenuates the effects of dexamfetamine. ▾ **Disulfiram** Possible inhibition of metabolism and excretion of dexamfetamine.	

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Antiepileptic drugs: absorption of ethosuximide, phenobarbital and phenytoin is delayed by amphetamines.
Coumarin anticoagulants (e.g. warfarin): Possibly reduces metabolism and enhances anticoagulant effect. Dose of warfarin may need to be reduced.
Antipsychotics. Possible decrease effectiveness of dexamfetamine and increase of side effects of antipsychotics.
Opioids. The analgesic effect of morphine may be increased, and its respiratory depressant effects decreased with concurrent use of morphine and dexamfetamine.
Clonidine increased duration of the action of dexamfetamine.
HIV-protease inhibitors concurrent use with amfetamines increases the concentration of amfetamines and is potentially fatal. Avoidance or dose reduction is advised.
The urinary excretion of amfetamines is increased by urinary acidifiers and reduced by urinary alkalinisers.

Gastrointestinal acidifying agents (guanethidine, reserpine, glutamic acid HCl, ascorbic acid, fruit juices etc.) lower the absorption of dexamfetamine.
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<tr><td>10. Adverse effects and management
(For a comprehensive list consult the BNF or Summary of Product Characteristics)</td><td>
Adverse drug reactions

The most common adverse effects include:

Metabolic effects such as decreased appetite with moderately reduced weight and growth during prolonged use.
Psychiatric effects such as aggression, agitation, labile affect, mood swings, and depression.
Central nervous system effects such as dizziness, dyskinesia, psychomotor hyperactivity, confusion, irritability, and headache.
Cardiovascular system effects such as hypertension, tachycardia, cardiomyopathy, and myocardial infarction.
Gastrointestinal effects such as diarrhoea, abdominal cramps, nausea, vomiting, and ischaemic colitis.
Urogenital effects such as sexual dysfunction.
Ophthalmological effects such as mydriasis.

<table>
<tr><th>Adverse Effect</th><th>Action</th></tr>
<tr><td>Sustained resting tachycardia, exertional chest pain, dyspnea and unexplained syncope or other symptoms suggestive of cardiac disease.</td><td>Discontinue treatment. Seek prompt cardiac specialist advice and notify the initiating specialist team</td></tr>
<tr><td>Clinically significant increases in blood pressure, arrhythmia</td><td>Exclude other causes and seek advice from the initiating specialist.</td></tr>
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	Reduced weight	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. If weight loss becomes a concern, seek ADHD specialist advice.
	Increase in seizure frequency or new-onset seizures	Refer to the initiating specialist team.
	Development or worsening of psychiatric disorders including psychotic or manic symptoms, aggressive or hostile behavior, anxiety, agitation, motor or vocal tics and suicidal ideation	Refer to the initiating specialist team.
	Central nervous system effects such as dizziness, dyskinesia, psychomotor hyperactivity, headache	Usually temporary. If persisting, refer to initiating specialist.
	Severe blood, kidney and liver disorders (incidental finding)	Exclude other causes. Repeat blood tests for confirmation. Seek initiating specialist advice if it is suspected the adverse effect is secondary to the drug.
	Glaucoma or other severe visual disturbances	Notify the initiating specialist Team. Seek ophthalmological advice and
	Diarrhea, abdominal cramps, nausea, vomiting *(usually occur at the beginning of treatment)*	Continue treatment. Initial symptoms may be alleviated by concomitant food intake. Exclude other causes. Seek initiating specialist advice if symptoms become severe.
	Insomnia	Continue treatment, usually transient. Provide sleep hygiene advice. Contact specialist for advice as dose and timing of dose may need to be adjusted
	Any serious reaction to dexamphetamine should be reported to the MHRA via the "Yellow Card" scheme on http://yellowcard.mhra.gov.uk/	
11. Advice to patient and carers	Patients should be informed dexamphetamine can cause dizziness, drowsiness and visual disturbances. It can impair cognitive function and affect the patient's ability to drive safely. This class of medicine is in the list of drugs included in regulation under 5a of the Road Traffic Act 1988 The patient should be advised to report any signs or symptoms suggestive of cardiac, psychiatric disorders or seizures to their GP without delay.	

	It is advisable for patients to abstain from alcohol during treatment as alcohol can worsen the side effects of dexamphetamine.
12. Pregnant or Breast feeding	Refer to initiating specialist
13. Specialist Contact Information	Mersey Care NHS Foundation Trust South Sefton Neighbourhood Centre Park Road Waterloo Liverpool L22 3XR Tel: 0151 330 8500
14. Additional information	Where patient care is transferred from one provider to another, a new shared care agreement must be completed.
15. References	1. Various summaries of product characteristics dexamfetamine 2. NICE guidelines (CG72) 2008: Attention deficit hyperactivity disorder: diagnosis and management **Updated August 2018** with Nice Guidelines (NG87) 2018: Attention deficit hyperactivity disorder: diagnosis and management https://www.nice.org.uk/guidance/ng87 3. NICE CKS for ADHD 4. British National Formulary

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, prescribe, monitor for toxicity and efficacy as described by the shared care framework until the patient is stabilised.
- To ensure the patient or their carer:
    - Is counselled with regard to the risks and benefits of the medicine.
    - Provide any necessary written information to the patient with regard to the individual medicine including patient information leaflets on individual drugs.
    - Obtain and document informed consent from the patient when any medicines is prescribed for an off-label indication for any condition
- To be familiar with the shared care framework.
- To provide all information to the patient's 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.
- 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 initiate, prescribe and monitor the new drug in accordance with the relevant shared care agreement including subsequent review and inform the GP of this. A new Shared Care Agreement must then be initiated for the new drug.

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 report any adverse effects of treatment to the specialist team.
- 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 patient’s 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 / Associate Specialist / Specialist registrar or Specialist Nurse (who must be a prescriber)

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 / Associate Specialist / Specialist Registrar / Specialist Nurse ***circle or underline 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 Specialist Nurse, 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

Part 3 Other Relevant Information

Part 4 Monitoring Requirements

Monitoring requirements are detailed in section 6 of the attached shared care framework.

Date	Weight	Pulse	Blood Pressure
Refer if:	[Please specify threshold]	[Please specify threshold]	[Please specify threshold]

Details of any recent relevant monitoring results:

Previous investigations completed	**Date**	**Result**	**Next date due**