Shared Care Guideline for Methylphenidate, Atomoxetine, Dexamfetamine & Lisdexamfetamine for ADHD in Children and Adolescents (GP Summary)

It is essential that a transfer of care only takes place with agreement of the GP and when sufficient information has been received. If the GP does not agree to share care they will inform the Consultant responsible for the patient's care.

Basingstoke, Winchester & Southampton District Prescribing Committee

Specialist Contact Details

Name:_____

Location:_____

Date:_____

Tel:_____

Patient ID Label

Surname:_____

Forename:_____

NHS Number:_____

Date of Birth:_____

Indications

Methylphenidate and atomoxetine are licensed for use in children of 6 years and over as part of a comprehensive treatment programme under specialist supervision for attention deficit hyperactivity disorder (ADHD) when non-drug remedial measures alone prove insufficient. Atomoxetine is an alternative in children who do not respond to methylphenidate.

Dexamfetamine is licensed as an adjunct in the management of refractory hyperkinetic states in children of 3 and older.

Lisdexamfetamine is licensed in children aged 6 years of age and over when response to previous methylphenidate treatment is considered clinically inadequate. Locally lisdexamfetamine therapy is indicated after the trial of at least two preparations of modified release methylphenidate, unless a previous adverse reaction to methylphenidate has ruled out further use.

Note: There are two branded generic Concerta XL formulations; Matoride XL & Xenidate XL now licensed in the UK which are considered to be bioequivalent to the original formulation. These preparations are considerably cheaper than Concerta XL, hence prescribers should consider where possible and clinically appropriate prescribing either of these two formulations instead of Concerta XL. In practice switching from Concerta XL to either of these preparations does not present with any specific concerns.

Dose & response

Licensed age	Starting Dose	Increase by (if needed)	Max Daily Dose	Comments
Methylphenidate (Immediate Release)				
Child >6 years	5mg OD or BD (breakfast & lunch)	By 5-10mg weekly	60mg a day in two or three divided doses	Additional dose may be needed later in day for children with rebound hyperactivity
Methylphenidate (SR) – Matoride XL, Xenidate XL & Concerta XL				
Child >6 years	18mg OD (morning)	Weekly by 18mg	54mg OD	15mg ordinary release is approx. equivalent to 18mg of Matoride/Xenidate Concerta XL
Methylphenidate (SR) – Equasym XL &Medikinet XL				
Child >6 years	10mg OD (morning before breakfast)	Weekly intervals	60mg	Capsules may be opened and contents sprinkled on yogurt or apple sauce & swallowed without chewing
Atomoxetine				
Child up to 70Kg	0.5mg/Kg a day for 7 days (morning)		1.2mg/Kg a day depending on weight & available dosage strengths	No additional benefit seen in dose >1.2mg/Kg a day

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	Child > 70Kg	40mg a day (morning) for 7 days		100mg a day (morning)	Licensed up to 100mg but no additional benefit with doses over 80mg
	Dexamfetamine				
	Child 3-5 years	2.5mg OD	2.5mg each week		
	Child 6 years or older	2.5mg two or three times a day	5mg each week	20mg	Occasionally up to 40mg in older children (dose in two to four divided doses)
	Lisdexamfetamine				
	Child > 6 years	30mg OD	20mg at least weekly intervals	70mg OD	Quick action so some parents use just on school days

GP Responsibilities

Key roles undertaken by primary care once a decision to work under shared care is made:

1. Prescribe controlled drugs (atomoxetine is not a controlled drug) in small quantities. Maximum 30 days treatment is now a national good practice recommendation, and longer scripts may be queried by community pharmacists. Note handwriting requirements (except a signature) no longer.
2. Discuss any concerns regarding monitoring, side effects, etc with the specialist.
3. To contact the specialist if deterioration in behaviour or adverse side effects.
4. To look out for signs of diversion (transfer of the medicine from the individual for whom it was prescribed to one for whom it is not prescribed), misuse, and abuse of stimulant medications (methylphendiate, dexamfetamine & lisdexamfetamine) i.e. excess requests for prescription, and to inform the specialist of diversion is suspected.
5. To refer patients who develop symptoms such as palpitations, exertional chest pain, unexplained syncope, dyspnoea, or symptoms suggestive of heart disease for prompt specialist cardiac evaluation.
6. To act upon results communicated by specialist.
7. To monitor prescribing rate of the ADHD drug for individual patients.
8. To review the appropriateness of prescribing for patients who have not been seen by a specialist for over one year.
9. To stop prescribing if requested to do so by the specialist.

Primary care monitoring

Unless otherwise advised by the specialist:

To undertake height , weight, BP and pulse if requested by specialist

No biochemical or plasma drug level monitoring is required.

Actions to be taken in response to monitoring

See specialist monitoring sheet for details of actions

Contra-indications

- Known sensitivity to methylphenidate, dexamfetamine, lisdexamfetamine or atomoxetine
- Cardiovascular disease or moderate/ severe hypertension.
- Hyperthyroidism.
- History of drug or alcohol abuse.
- Glaucoma.
- Pregnancy or breastfeeding.
- Concomitant use of atomoxetine, methylphenidate, dexamfetamine and lisdexamfetamine with monoamine oxidase inhibitors

(see BNF or EMC for complete list www.medicines.org.uk)

Cautions

- Refer to full SCG or SPC for caution list

Important adverse effects & management

Common Side Effects	Drugs associated	Lasting Effect?	Actions
Nausea and Vomiting.	Methylphenidate Atomoxetine	Usually transient	Stop drug if persists for longer than a few days or becomes untenable
Drowsiness, Headache, Effects on vision	Methylphenidate Dexamfetamine Lisdexamfetamine	Usually transient	Stop drug if persists for longer than a few days or becomes untenable
Insomnia	Lisdexamfetamine Dexamfetamine Methylphenidate	Usually poor settling, especially in a child who was a poor sleeper before. May be	If not transient: Move the evening dose to 6pm first/or try reducing the 4pm dose.

	transient.		
Somnolence	Atomoxetine	Usually transient, occurs early in therapy. May be helped by taking dose with food to slow rate of absorption	Be sure to distinguish between somnolence and reduction in ADHD symptoms. Usually transient but can continue for some weeks. Stop drug if becomes untenable.
Early morning wakening	Atomoxetine	Usually transient	Stop drug if persists for longer than a few days or becomes untenable
Abdominal pain	Atomoxetine	Usually transient – may be more common with BD dosing	Stop drug if persists for longer than a few days or becomes untenable
Irritability & mood swings	Atomoxetine		If problematic contact monitoring consultant for further advice
Poor appetite	Lisdexamfetamine Dexamfetamine Methylphenidate Atomoxetine**	Usually transient. If persists, usually in children who have always been fussy eaters	Give the drug after the meal. Make sure the child eats a lot at night when medication has worn off. Monitor height and weight. If child has moved down through a centile refer to specialist for advice about dose adjustment/stopping therapy.

**Some patients lose weight early in therapy especially at higher doses. Weight and height rates after 2 years are near normal

For less common side effects please refer to full SCG

Important Drug Interactions

Methylphenidate

- May inhibit the metabolism of coumarin anticoagulants, some anticonvulsants, phenylbutazone and tricyclic antidepressants. The dosage of these drugs may need to be reduced.
- Should not be used with MAOI's nor initiated within two weeks of cessation of treatment with an MAOI as may precipitate a hypertensive crisis
- Caution with pressor agents

Dexamfetamine/lisdexamfetamine

- Should not be used with MAOI's nor initiated within two weeks of cessation of treatment with an MAOI as may precipitate a hypertensive crisis
- Adrenoreceptor blocking agents e.g. propranolol, lithium and α methyltyrosine may antagonise the effects of dexamfetamine. Concurrent use with beta blockers may precipitate a hypertensive crisis
- Use with tricyclic antidepressants may increase risk of cardiovascular side effects
- Acute dystonias have been noted with concurrent administration of haloperidol
- Phenothiazines may inhibit the actions of dexamfetamine
- Dexamfetamine may inhibit the absorption of ethosuximide, phenobarbital and Phenytoin

Atomoxetine

- Atomoxetine can be used initially in combination with stimulant medications, whilst waiting for sufficient clinical effect of the atomoxetine to commence. Once sufficient clinical effect of atomoxetine has been established the stimulant medication should be discontinued due to clinical evidence of potential additive risk of blood pressure elevation.
- Caution with pressor agents or drugs affecting noradrenaline, e.g. venlafaxine, mirtazapine
- Should not be used with MAOI's nor initiated within two weeks of cessation of treatment with an MAOI as may precipitate a hypertensive crisis.
- Caution with drugs that can prolong the QT interval, e.g. anti-arrhythmics, erythromycin, tricyclic antidepressants, antipsychotics, lithium, etc.
- Caution in patients on high dose nebulised/systemic salbutamol.
- Caution with drugs which lower the convulsive threshold e.g. antipsychotics