BNSSG Shared Care Guidance
Please complete all sections

Section 1: Heading

Drug	Methylphenidate M/R for adults with ADHD
Amber ***three months***	
Indication	Treatment of ADHD in Adults
Speciality / Department	Bristol ADHD Service (Attention Deficit Hyperactivity Disorder)
Trust(s)	Avon and Wiltshire Mental Health Partnership NHS Trust
	Click here to enter details
	Click here to enter details

Section 2: Treatment Schedule

Usual dose and frequency of administration	Methylphenidate is not currently licensed for initiation in adult patients but NICE Guideline CG72 supports the first line use of methylphenidate in adults. This SCP only covers adult ADHD patients with no other serious mental health co-morbidities who are stabilised on a modified release methylphenidate preparation. Dose: From 10 to 90mg per day typically. Various modified release formulations exist and any brand may be prescribed. **Concerta XL 18mg and 36mg tablets** - The dose may be adjusted in 18mg increments to a maximum of 90mg/day taken once daily in the morning. In general, dosage adjustment may proceed at approximately weekly intervals. This is the brand that is used in the majority of patients. **Equasym XL 10mg, 20mg, 30mg** - 10mg once daily in the morning before breakfast increasing if necessary by weekly increments to a maximum of 90mg daily. Discontinue if no improvement after one month. **Medikinet XL 5mg, 10mg, 20mg, 30mg and 40mg** – 10mg once daily in the morning before breakfast, adjusted at weekly intervals according to response. Usual max 60mg/day,

	although may be increased to 2.1mg/kg daily (max 90mg daily) under the direction of a specialist. **Methylphenidate is classed as a Schedule2 Controlled Drug under the Misuse of Dugs Act 1971. Prescriptions must therefore conform to the Misuse of Drugs Regulations 2001.** It is 'best practice' is to prescribe one month supply or less of schedule 2 controlled drugs at a time.
Route and formulation	Oral. M/R tablets and capsules – formulation depends on brand.
Duration of treatment	Patients can choose to try stopping the medication every 1 to 5 years, with the guidance of the specialist clinic if desired. There is no criterion with specific predictivity on this point, except that patients will generally report definitively either way, if they feel they still need the medication once they are off it for longer than a few days.

Section 3: Monitoring

Please give details of any tests that are required before or during treatment, including frequency, responsibilities (please state whether they will be undertaken in primary or secondary care), cause for adjustment and when it is required to refer back to the specialist.

Baseline tests - where appropriate
1. The GP practice to check BP, pulse and weight at referral. 2. GP to carry out cardiac exam/ ECG if clinically indicated (e.g. family history of early CHD etc) prior to referral 3. The AWP ADHD clinic to check BP, pulse and weight at the first appointment after starting treatment, and at the annual review 4. No need to check bloods or other parameters unless specific individual concerns exist. If abnormality is found at baseline, investigate and treat as appropriate for that abnormality. If hypertension or tachycardia due to medication, then psychiatrist will be responsible for adjusting medication regime
Subsequent tests - where appropriate
If abnormality is found at baseline (see above), investigate and treat as appropriate for that abnormality. If hypertension or tachycardia is due to medication, then the ADHD specialist will be responsible for adjusting the medication regime.

Section 4: Side Effects

Please list the most common side effects and management. Please provide guidance on when the GP should refer back to the specialist.

Side effects and management	**Very Common:** **Headache** – This is usually transient. If it persists, consider stopping and consult the specialist team.

Insomnia - This may be transient. Refer to the specialist team if persistent.

Common:

Decreased appetite – This is usually transient. Taking the drug after meals may help improve appetite. Weight loss is rare in adults.
Abdominal pain / discomfort - Contact the specialist team if persistent.
Dry Mouth - Contact the specialist team if this persists.
Cardiovascular symptoms e.g. arrhythmias, tachycardia, hypertension, and palpitations - Monitor the BP and pulse, and if necessary do an ECG. If the pulse is > 100, contact the specialist team.
GI symptoms e.g. nausea, vomiting, diarrhoea, dyspepsia - Contact the specialist team if persistent.
Erectile dysfunction – Contact the specialist team for advice.

Uncommon:

Hypersensitivity reactions - Contact specialist team.

Rare:

Difficulties in visual accommodation – This is usually transient.- Contact specialist team if this persists.

Very Rare:
Neuroleptic Malignant syndrome - Stop drug and refer. This is characterised by: hyperthermia, fluctuating conscious level, muscular rigidity, autonomic dysfunction with pallor, tachycardia, labile blood pressure and urinary incontinence
Leucopaenia, thrombocytopenia and anaemia - Refer to the specialist team – the drug may need to be stopped.

More rarely, depression, or very rarely, psychosis.

Effects on ability to drive and use machines:

Methylphenidate can cause dizziness, drowsiness and visual disturbances including difficulties with accommodation, diplopia and blurred vision. It may have a moderate influence on the ability to drive and use machines. Patients should be warned of these possible effects and advised that if affected, they should avoid potentially hazardous activities such as driving or operating machinery.

This medicine can impair cognitive function and can affect a patient's ability to drive safely. This class of medicine is in the list of drugs included in regulations under 5a of the Road Traffic Act 1988. When prescribing this medicine, patients should be told:

- The medicine is likely to affect your ability to drive
- Do not drive until you know how the medicine affects you
- It is an offence to drive while under the influence of this medicine
- However, you would not be committing an offence (called 'statutory defence') if:
    - The medicine has been prescribed to treat a medical or dental problem and
    - You have taken it according to the instructions given by the

	prescriber and in the information provided with the medicine and o It was not affecting your ability to drive safely. Please refer to the MHRA Alert regarding the 'New Drug Driving Offence' which is due to come into effect in Summer of 2014.
Referral back to specialist	Refer back to the specialist if: • The patient finds the medication intolerable for any given reason, or • if you are concerned about observed mental or physical side effects (e.g. depression or hypertension), or • the side effects mentioned above, appear to persist beyond the first week of medication. If the patient experiences symptoms of hypertension, insomnia, agitation, anxiety and appetite suppression, they generally subside after 3-4 days.

Section 5: Drug Interactions

Please list clinically significant drug interactions (eMC link please click here)

Significant Drug Interactions	**Alcohol**: CNS effects of methylphenidate possibly enhanced by alcohol. **Antihypertensives**: Methylphenidate may decrease the effectiveness of drugs used to treat hypertension. **Antiepileptics**: Possible increased plasma concentration of phenobarbital and phenytoin. **Antipsychotics**: Possible increased side effects of risperidone. (see 'dopaminergic drugs' below. **Clonidine**: Serious adverse events reported with concomitant use of methylphenidate and clonidine (causality not established). **Coumarin anticoagulants e.g. warfarin** (inhibit metabolism leading to increased anticoagulant effect). **MAOIs and moclobemide**: Risk of hypertensive crisis. Avoid methylphenidate for at least 2 weeks after stopping MAOIs. **Tricyclic antidepressants and SSRIs**: Possible increased levels of TCA/SSRI as methylphenidate inhibits metabolism. Others: not to be given with: Adrenergic neurone blockers: Methylphenidate antagonises hypotensive effect of adrenergic neurone blockers. Other sympathomimetics e.g. pseudoephedrine and decongestants. General anaesthetics (volatile liquids): Increased risk of hypertension. Dopaminergic drugs: Pharmacodynamic interactions due to

	increased extracellular dopamine.
Reminder to ask patient about specific problems	Ask about emergence of any possible side effects / compliance to treatment.

Section 6: Contra-indications, Cautions and Special Recommendations

Please list

Absolute contraindications:

Treatment with non-selective, irreversible monoamine oxidase inhibitors (MAOIs) or within a minimum of 14 days of discontinuing these due to the risk of hypertensive crisis.

Contraindications

- Known sensitivity to methylphenidate or to any of the excipients in the particular formulation (e.g. Equasym, Concerta, Medikinet)
- Pregnancy
- Glaucoma
- Phaechromocytoma
- Hyperthyroidism or thyrotoxicosis
- Diagnosis or history of severe depression, anorexia nervosa/anorexic disorders, suicidal tendencies, psychotic symptoms, severe mood disorders, mania, schizophrenia, psychopathic/borderline personality disorder.
- Diagnosis or history of severe and episodic (Type 1) Bipolar (affective) disorder
- Pre-existing cardiovascular disorders including severe hypertension, heart failure, arterial occlusive disease, angina, haemodynamically significant congenital heart disease, cardiomyopathies, myocardial infarction, potentially life-threatening arrhythmias and channelopathies (disorders caused by the dysfunction of ion channels)
- Pre-existing cerebrovascular disorders cerebral aneurysm, vascular abnormalities including vasculitis or stroke or known risk factors for cerebrovascular disorders.

Dose reduction and discontinuation

If the symptoms of ADHD do not improve after appropriate dosage adjustment treatment must be stopped by the clinic. If paradoxical aggravation of symptoms or other serious adverse events occur, the dosage should be reduced or discontinued – advice should be sought from and managed by the AWP ADHD clinic.

Special warnings and precautions for use:

- Pre-existing cardiac disease.
- Cerebrovascular disorders.
- Development or worsening of psychiatric disorders.
- History of eating disorder.
- Epilepsy
- Tourette's syndrome

Section 7: Advice to the patient

Advice for prescribing clinician to inform patient

1. There is no specific psychiatric emergency that relates to ADHD. This is a lifelong condition that generally does not wax and wane.
2. Blood pressure should be monitored at appropriate intervals (see Responsibilities for Primary care and Secondary Care, below) in all patients taking methylphenidate, especially those with hypertension.
3. Caution is called for in emotionally unstable patients, such as those with a history of drug dependence or alcoholism, because such patients may increase the dosage on their own initiative.
4. The AWP ADHD clinic runs 9am to 5pm weekdays and we welcome enquiries from patients and professionals alike, on any matter relating to ADHD in adults.
5. **Adult ADHD medications are unlikely to increase in dosage once the medication dose is stabilised.**
6. Patients can choose to miss medications on days they don't feel they will need them.
7. **It is not advisable to drink alcohol or take other recreational drugs whilst on methylphenidate.**
8. Once stabilised the patient should attend an annual review at the clinic, failure to do this could result in the medication being stopped.
9. Patients can choose to try stopping the medication every 1 to 5 years, with the guidance of the specialist clinic if desired. There is no criterion with specific predictivity on this point, except that patients will generally report definitively either way, if they feel they still need the medication once they are off it for longer than a few days.

Section 8: Responsibilities for Secondary Care

Core responsibilities

1. Initiating treatment and prescribing for the first three months
2. Undertaking the clinical assessment and monitoring for the first three months.
3. Communicate details of the above in 1 and 2 to GP within the first month of treatment. This information should be transferred in a timely manner.
4. Refer patients to GP and provide information of further action where appropriate e.g. blood test is due.
5. To provide advice to primary care when appropriate.
6. Review concurrent medications for potential interaction prior to initiation of methylphenidate M/R..
7. Stopping treatment where appropriate or providing advice on when to stop.
8. Reporting adverse events to the MHRA.
9. Reminder to ask patients about particular problems see section 5.

Other specific to drug

1. Full psychiatric assessment including a structured objective assessment of symptoms.
2. Initiate treatment and prescribing for first 3 months. Reclaiming responsibility of prescribing during subsequent times of dose adjustment (e.g. during a dechallenge)
3. Monitor Blood pressure, pulse and weight at first appointment after initiating drug, and at annual reviews. Inform GP of abnormal results and any actions taken or required.
4. To provide the patient with information on drug prescribed including a patient information leaflet (PIL). Information on mental health conditions, treatments and medication can be found at: http://www.choiceandmedication.org/awp/
5. Yearly psychiatric review of all patients once stabilised, including a decision on whether to try challenge off medication and annual monitoring of BP, pulse and weight.
6. Liaising with all professionals and carers involved in the patient's care, as necessary.
7. Communicate promptly with the GP when treatment is changed.
8. Providing access to psychological treatments.
9. Liaising with pharmacies on matters of supply and admin issues.
10. Being available by phone to GPs during office hours, with a target of 24 hours in work time

for a clinician to return any enquiry calls.

Section 9: Responsibilities for Primary Care

Core responsibilities 1. Responsible for taking over prescribing after the first three months 2. Responsible for the clinical assessment and monitoring after the first three months 3. Review of any new concurrent medications for potential interactions. 4. Reporting adverse events to the MHRA. 5. Refer for advice to specialist where appropriate. 6. Reminder to ask patients about particular problems see section 5.
Other specific to drug
1. Following a request for shared care of a patient, if the GP or any GP within the practice is unable to take on the prescribing for these patients, then the clinic should be informed as soon as possible (within 3 weeks of receipt of request). 2. If the GP decides not to prescribe methylphenidate, it should still be added to the patients repeat list as a “non issued item” for information and safety purposes and ‘Hospital prescribing only. Do not prescribe’ on the dose line. This should also be done during the stabilisation period before the GP takes over the prescribing. 3. Checking BP, pulse and weight of patients prior to referral. Treating appropriately and/or consulting the clinic of abnormality detected.(Check more often if clinically relevant e.g. patient has pre-existing hypertension). 4. Adjust the dose/stop drug as advised by the specialist. 5. To manage minor adverse events as appropriate. 6. To encourage and maintain a holistic and shared approach to the adult’s care, with the adult being primarily responsible for decisions about his/her health and treatment.

Section 10: Contact Details

Name	Organisation	Telephone Number	E mail address
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Section 11: Document Details

Date prepared	Revised July 2014 (from previous version March 2012)
Prepared by	Bethan Shepherd, Formulary Pharmacist on behalf of Dr O Badat from previous version.
Date approved by JFG	2nd September 2014
Date of review	September 2016
Document Identification: Version	Methylphenidate MR AWP July14 V0.2

Section 12: Collaboration

Specialists in any one discipline are encouraged to collaborate across the health community in preparing shared care guidance. Please give details

Circulation of the original shared care protocol (March 2012) and supporting documents has been wide, and includes: Commissioners from NHS Bristol, NHS North Somerset and NHS South Gloucestershire, other Consultant Psychiatrists, other ADHD services (including Maudsley Hospital), and GPs interested in developing this guidance.

Section 13: References

1. Summary of Product Characteristics
2. https://www.medicinescomplete.com/mc/bnf/current/bnf_int690-sympathomimetics.htm
3. Treatment for ADHD in Adults – NICE pathway July 2014.
4. NICE Diagnosis and management of ADHD in children, young people and adults CG 72

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The Bristol Care Pathway for Adults with ADHD