BNSSG Shared Care Guidance
Please complete all sections

Section 1: Heading

Drug	Methylphenidate MR and IR
Amber *three months*	
Indication	Treatment of ADHD in Adults

Section 2: Treatment Schedule

Usual dose and frequency of administration *(Please indicate if this is licensed or unlicensed and any relevant dosing information)*	**This SCP only covers adult ADHD patients with no other active serious mental health co-morbidities who are stabilised on a methylphenidate preparation.** Methylphenidate is not currently licensed for initiation in adult patients but NICE Guideline NG87 supports the first line use of methylphenidate in adults. Dose: From 10 to 90mg per day typically. Various modified release formulations exist and any brand may be prescribed. Differences between different modified release brands have been experienced. GPs should continue on the brand that has been initiated by specialist unless otherwise instructed. **Xaggitin XL 18mg and 36mg tablets** (Other brands available Concerta XL, Xenidate XL and Delmosart) - 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 immediate release tablets** Initially 5 mg 2–3 times a day, dose is increased if necessary at weekly intervals according to response, increased if necessary up to 100 mg daily in 2–3 divided doses, if effect wears off in evening (with rebound hyperactivity) a dose at bedtime may be appropriate (establish need with trial bedtime dose). **Methylphenidate is classed as a Schedule 2 Controlled Drug under the Misuse of Dugs Act 1971. Prescriptions must therefore conform to the Misuse of Drugs Regulations 2001**. It is

	'best practice' to prescribe one month supply or less of schedule 2 controlled drugs at a time.
Route and formulation	Oral. Immediate release tablets M/R tablets and capsules – formulation depends on brand.
Duration of treatment	Patients should be encouraged to consider stopping the medication every 1 to 5 years, with the guidance of the specialist clinic if desired. Reduce the dose at weekly increments and discontinue over a four week period. If desired and clinically appropriate, Methylphenidate can be restarted by the GP, referral back into the ADHD service is not necessary

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, as per Referral form.
2. GP to carry out cardiac exam/ ECG if clinically indicated (e.g. family history of early CHD etc) prior to referral.
3. ADHD clinic to check BP, pulse and weight at the first appointment after starting treatment.

If any physical abnormality is found or suspected at baseline, investigate and treat as appropriate for that abnormality.

Subsequent tests - where appropriate *(Please indicate who takes responsibility for taking bloods and interpreting results)*

Test	Frequency	Who by	Action/management
BP, Pulse, Weight, height	First appointment	ADHD clinic	To prepare for medication titration
BP	After each dose increase and every 6 months and at annual review.	ADHD clinic if titration taking place in clinic At 6 monthly intervals: Patients can self-monitor and report to primary care or can be done by Primary Care At annual review: To be done by primary care.	If there is a clinically significant increase in blood pressure, monitor and treat as per usual unless it is felt that ADHD treatment benefits don't outweigh antihypertensive treatment requirement; discuss with ADHD clinic to consider dose adjustment or alternative ADHD treatment
Pulse			NICE guidance suggest to investigate a resting tachycardia of > 120pbm; we suggest to monitor and possibly investigate a sustained resting tachycardia >100bpm; consider ECG; discuss with ADHD clinic.
Weight			If there is evidence of significant weight loss, measure BMI and discuss with patient as appropriate. Strategies to manage

			weight loss include: -Taking medication with or after food. -Additional meals/snacks early morning or late evening when stimulant effects have worn off. -Choosing high calorie foods of good nutritional value. -Taking a planned break from treatment or changing medication.

Section 4: Side Effects

Please list only the most pertinent side effects and management. Please provide guidance on when the GP should refer back to the specialist. For everything else, please see BNF or SPC.

Side effects and management

Side effect	Frequency/severity	Action/management
Headache	Very Common	This is usually transient. If it persists, consider stopping and consult the specialist team.
Insomnia/nervousness	Very Common	This may be transient. Refer to the specialist team if persistent.
Decreased appetite	Common	This is usually transient. Taking the drug after meals may help improve appetite. Weight loss is rare in adults.
GI disorders- diarrhoea, nausea, vomiting, abdominal pain	Common	Contact specialist team if persists.
Reduced libido/erectile dysfunction	Common	Contact specialist.
Cardiovascular symptoms (tachycardia, palpitations)	Common	Monitor the BP and pulse, and if necessary do an ECG. If the pulse is consistently > 100, contact the specialist team.
Hypersensitivity reactions	Uncommon	Contact specialist.
Difficulties in visual accommodation	Rare	Usually transient, contact specialist if persists.
Leucopaenia, thrombocytopenia and anaemia	Very Rare	Refer to specialist team – the drug may need to be stopped.

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 - It was not affecting your ability to drive safely.
Referral back to specialist	Contact specialist for advice if: •The patient finds the medication intolerable for any given reason •If there is concern about observed mental or physical side effects (e.g. depression or hypertension) •The side effects mentioned above, do not appear to be of a temporary and short lived nature

Section 5: Other Issues

(e.g. Drug Interactions, Contra-indications, Cautions, Special Recommendations)

Please list only the most pertinent action for GP to take (For full list please see BNF or SPC)

Issues	**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. • Clonidine: Serious adverse events reported with concomitant use of methylphenidate and clonidine (causality not established). • Coumarin anticoagulants e.g. warfarin (Possibly 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 other sympathomimetics e.g. pseudoephedrine and decongestants • General anaesthetics (volatile liquids): Increased risk of hypertension, patient to withhold methylphenidate on the day of surgery. • Discontinue if Serotonin Syndrome is suspected **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, Xaggitin, Xenidate, Delmosart) •Pregnancy •Glaucoma •Phaeochromocytoma •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. **Special warnings and precautions for use** •Pre-existing cardiac disease. •Cerebrovascular disorders. •Development or worsening of psychiatric disorders, including suicidal tendency. •Aggressive and hostile behaviour •History of eating disorder. •Epilepsy •Tourette's syndrome **Dose reduction and discontinuation** If paradoxical aggravation of symptoms or other serious adverse events occur, the dosage should be reduced or discontinued – advice should be sought from the AWP ADHD clinic. Careful supervision is required during drug withdrawal, since this may unmask depression as well as chronic over-activity Patients should be carefully monitored for the risk of diversion, misuse and abuse of methylphenidate. Methylphenidate should be used with caution in patients with known drug or alcohol dependency because of a potential for abuse, misuse or diversion.
Reminder to ask patient about specific problems	Ask about emergence of any possible side effects / compliance to treatment.

Section 6: Advice to the patient

Advice for prescribing clinician to inform patient

1. It is not advisable to drink alcohol, use recreational substances or consume excessive amounts of caffeine whilst on stimulant medication.
2. Failure to attend annual reviews when called for by the GP, could result in the medication being stopped.
3. Patients can choose to try stopping the medication. Annual reviews are an ideal opportunity to discuss this but a desire to stop medication can be expressed and discussed at anytime.
4. 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/

Section 7: Generic principles of shared care for SECONDARY CARE

Please do not amend.

Core responsibilities

1. Initiating treatment and prescribing for the length of time specified in **section 1.**
2. Undertaking the clinical assessment and monitoring for the length of time specified in **section 1** and thereafter undertaking any ongoing monitoring as detailed in **section 3.**
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. if blood test is due.
5. To provide advice to primary care when appropriate.
6. Review concurrent medications for potential interaction prior to initiation of drug specified in **section 1.**

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.**

Section 8: Generic principles of shared care for PRIMARY CARE

Please do not amend.

Core responsibilities

1. Responsible for taking over prescribing after the length of time specified in **section 1.**
2. Responsible for any clinical assessment and monitoring if detailed in **section 3** after the length of time specified in **section 1.**
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.**

Section 10: Contact Details

Name	Organisation	Telephone Number	E mail address
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Click here to enter details	Click here to enter details	Click here to enter details	Click here to enter details

Section 11: Document Details

Date prepared	29th November 2019
Prepared by	Emily Knight/Dietmar Hank
Date approved by JFG	3rd March 2020
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Section 12: Collaboration

All shared care protocols should be BNSSG wide where possible. Specialists in any one discipline are encouraged to collaborate across the health community in preparing shared care guidance. Please give details

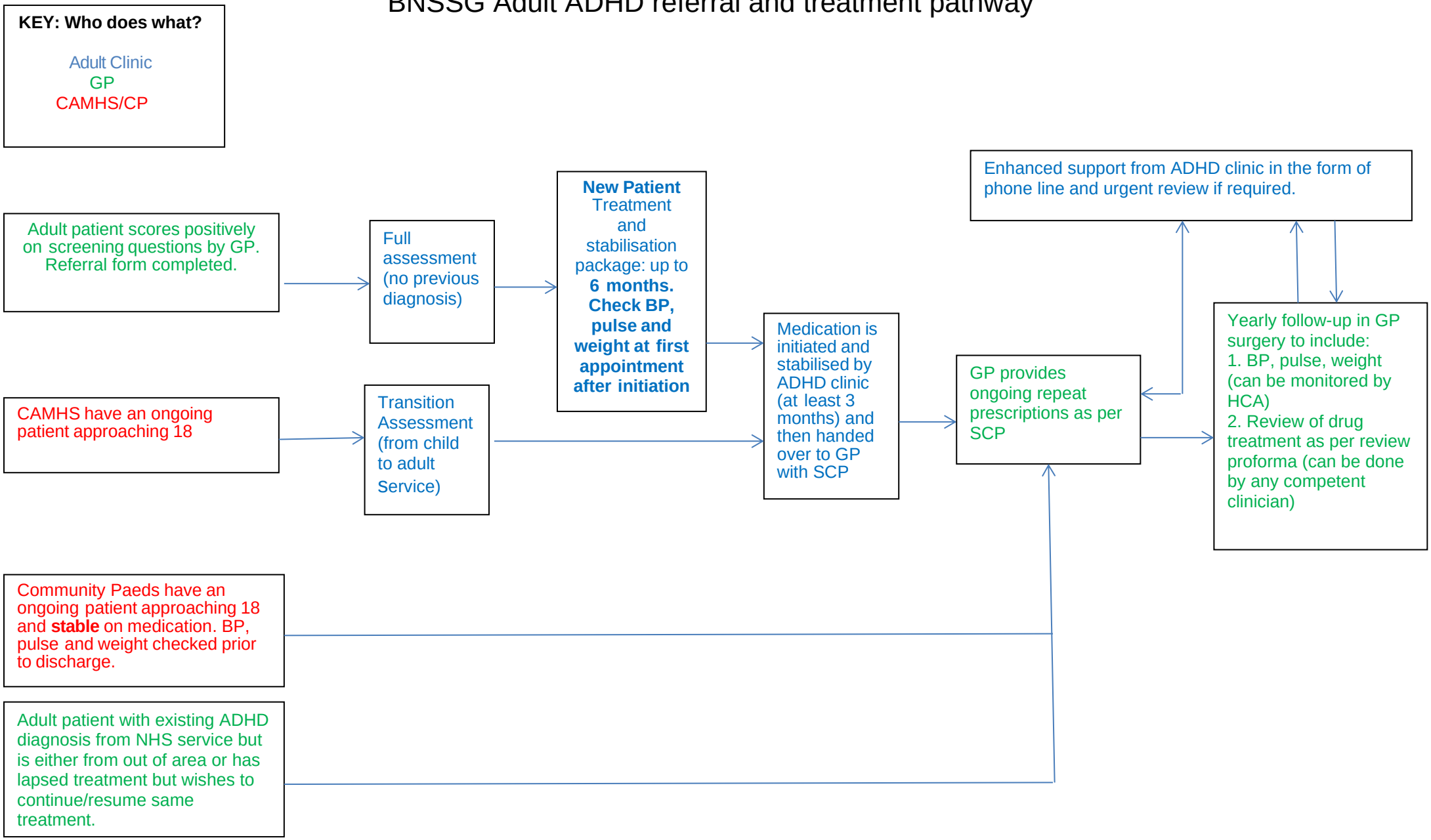
1. Click here to enter details

Section 13: References

Please list references

1. BNF online
2. EMC SPC for methylphenidate (Concerta XL) https://www.medicines.org.uk/emc/product/6872/smpc

BNSSG Adult ADHD referral and treatment pathway



Patients under CAMHs will generally be more complex and may be more likely to require Adult specialist input at transition. Patients under Community Paediatrics will generally be defined as more stable and able to be moved to care of the GP at transition.