POLICY
SHARED CARE FOR MENTAL HEALTH SERVICES WITH IN THE ISLE OF MAN

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Superseded documents	N/A	
Stakeholders consulted prior to ratification	Drug & Alcohol Team (DAT) Child & Adolescent Mental Health Service (CAMHS) Primary Care Network (PCN)	
Ratified by	Integrated Medicines Optimisation Group (IMOG)	**Date** June 2022
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Changes made during latest review	N/A	

1. INTRODUCTION

1.1 Purpose

This guidance gives the information for shared care, the front sheets give an overview for all shared care followed by a letter to provide to the GP to inform them of the shared care which is to be sent to by the mental health services. Each of the individual drugs are then held in the appendixes, detailing all the monitoring and specialist information.

1.2 Scope

1.2.1 Responsibilities of Manx Care

a) Agree any changes to this shared care agreement with the Isle of Man Primary Care Network.
b) Agree a formulary of shared care drugs and individual shared care drug protocols with the Isle of Man Primary Care Network.
c) Ensure the good clinical governance of the specialist service.
d) Ensure that patients are managed and reviewed by a specialist clinician of appropriate seniority and experience.
e) Regularly review this agreement and the individual protocols to ensure that they remain up to date with current guidelines and clinical practice.

f) Provide a mechanism for transition between services (for example child to adult, or adult to elderly).
g) Have a mechanism in place to receive a rapid referral of a patient from the GP in the event of adverse effects or deteriorating clinical condition.
h) Ensure that clear arrangements exist for GPs to obtain advice and support.

1.2.2 General Secondary Care Responsibilities:

a) Confirm diagnosis following full assessment drawing upon information from all relevant sources.
b) Initiation, adjustment and stabilization of the patient's medication, by a suitably qualified healthcare professional with expertise in the specific area.
c) Assessment and treatment of co-morbid conditions.
d) Baseline measurement of height, weight, blood pressure plus any additional relevant investigations.
e) Discuss the benefits, side effects, intended outcomes and possible drug interactions of treatment and MHRA warning treatment with the patient/carer, according to relevant guidelines.
f) If a drug is unlicensed or being used off-label, discuss this with the patient/carer, obtain informed consent, and document this clearly in the medical notes.
g) Communication with the GP regarding changes in treatment, assessment of adverse events, and to initiate shared care once stabilized on medication.
h) Provision of advice or support to primary care professionals as may be required.
i) Decision to stop treatment when appropriate
j) Ensure that secondary care monitoring is carried out in a timely manner by an appropriately qualified clinician.
k) Comply with relevant guidelines and best practice, including the use of non-drug interventions where appropriate.

1.2.3 GP – Primary Care Responsibilities:

a) Follow each drug's shared care protocol
b) Reply to the request for shared care as soon as practicable, preferably within 5 working days, by emailing back the shared care letter. If declining the request please indicate the reason for declining.
c) Provide repeat prescriptions once the patient is on a stable regular dose of medication.
d) Report any adverse effects of medication to the mental health specialist.
e) Refer the patient back to the specialist when required
f) Ensure that the agreed primary care monitoring is carried out in a timely manner by an appropriately qualified clinician.

2. POLICY

This shared care agreement (SCA) outlines suggested ways in which the responsibilities for managing the prescribing of medications can be shared between the specialist and general practitioner (GP).

In such an event, the total clinical responsibility for the patient for the diagnosed condition remains with the specialist.

If a specialist asks the GP to prescribe this drug, the GP should reply to this request as soon as practical.

Sharing of care assumes communication between the specialist, GP and patient. The intention to share care is usually explained to the patient by the specialist initiating treatment. It is important that patients are consulted about treatment and are in agreement with it.

The professional who prescribes the medication legally assumes clinical responsibility for the drug and the consequences of its use.

3. REFERENCES AND/OR RESOURCES

(see within each appendices)

4. APPENDICES

a) Shared Care Agreement Form
b) Shared Care Medication – Methylphenidate
c) Shared Care Medication – Acamprosate
d) Shared Care Medication – Atomoxetine
e) Shared Care Medication – Disulfiram
f) Shared Care Medication – Lisdexafetamine
g) Shared Care Medication – Melatonin for Children
h) Shared Care Medication – Guanfacine
i) Shared Care Medication – Second Generation Antipsychotics

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Kiarail Vannin

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(Complete as appropriate)
Nobles Hospital site
Braddan
Isle of Man
IM4 4RF

T: +44 (**complete as per department)**
Email **Complete as per department**

Date:	
Patient Name:	
Date of Birth:	

Dear Dr

Request to continue prescribing of a shared care drug

I have started this patient on the above drug that has been deemed as appropriate for shared care.

Medication

Drug	**Dose**	**Indication**	**Unlicenced/off-label (tick)**	**Last issued (quantity and date)**	**Prescribing (tick)**		
					GP - shared care	**GP - GMS**	**Specialist**

Please would you continue to prescribe the shared care medication according to the Manx Care/ IOMPCN shared care agreement.

I will advise the patient/carer that they have responsibility to ensure that they attend all their monitoring appointments. If drug monitoring is not up to date then a prescription will not be issued. I will also advise the patient/carer that they must take responsibility for timely ordering of medications from the GP and that urgent prescriptions will not be issued.

Where drugs are unlicensed or off-label I have advised the patient/carer of this fact and documented this discussion in my clinical notes.

If you are agreeable, please could you complete the section below and return it to me by email as soon as possible but at the latest within 5 working days. If you wish to discuss this with me, please contact me via my secretary. *(See telephone below).*

On receipt of your agreement to participate, I will write to the patient to inform them that they will be able to order the medication from your surgery. That letter will be used as the written request for the medication. It states that patients **DO NOT** need to make an appointment to see their GP to request the medication.

Yours sincerely,

Specialist name: _____
Telephone number: _____
Email Address: _____

For completion by GP: (complete section below and send back to the Specialist within 5 working days)					
I agree to prescribe (tick as appropriate)	**Yes**		**No**	**I would like to discuss further:**	
Reasons if "No"					
Prescriber Name:					
Signature:					

Appendix B

Methylphenidate in Children

Licensed indications

Methylphenidate is indicated as part of the treatment of ADHD where non-pharmacological interventions alone have proven insufficient. It should be used as part of a total package of care including cognitive, educational, behavioral and social components.

Dosage and Administration

Methylphenidate is available as standard and sustained-release preparations. The dose of standard-release methylphenidate is initially 5mg once or twice daily. The dose and frequency of administration may be increased if necessary by weekly increments of 5 -10 mg in the daily dose, increasing to a maximum of 60 mg/day in divided doses. Methylphenidate usually starts to be clinically effective within 15-30 minutes and wears off in 3-5 hours.

If the effect of the drug wears off too early in the evening, rebound hyperactivity and/or inability to go to sleep may recur. A small evening dose may help to reduce the rebound hyperactivity. Children who develop insomnia should not receive medication later than 1pm. In contrast, children who do not develop insomnia may be helped significantly by a dose after school, which covers them for homework.

Modified release **tablets** are only suitable if they can be swallowed whole and should not be given to patients with severe GI narrowing or dysphagia or significant difficulties in swallowing tablets. The contents of modified release **capsules** can be sprinkled on a tablespoon of apple sauce then swallowed immediately without chewing, followed by a drink e.g. water. Please note – although the modified release preparations are intended to have a duration of action lasting 24 hours it is the experience of local psychiatrists that the duration of action is sometimes shorter (sometimes as little as 8 hours):

- The initial dose of Concerta XL® prolonged-release methylphenidate is 18 mg once daily (every morning), increased gradually if necessary in steps of 18 mg at weekly intervals up to a maximum of 54 mg/day (15 mg standard-release methylphenidate = 18 mg sustained-release methylphenidate).
- The initial dose of Equasym XL® modified-release methylphenidate is 10 mg once a day in the morning before breakfast increased gradually if necessary at weekly intervals to a maximum of 60 mg daily.
- The initial dose of Medikinet XL® prolonged-release methylphenidate is 10 mg once a day in the morning with breakfast, increased gradually if necessary in steps of 5 to 10 mg at weekly intervals to a maximum of 60 mg daily.
- The initial dose of Xagittin XL® prolonged-release methylphenidate for patients' not currently taking methylphenidate (or those on alternative stimulants) is 18 mg once daily.

NB. The modified release products listed above have different release profiles; branded prescribing is essential. Xaggitin XL has been shown to be bioequivalent to Concerta XL® and is a more cost effective formulation than Concerta XL.

- If improvement of symptoms is not observed over a one-month period, the drug should be discontinued. Robust arrangements for dosing during school hours should be agreed with the school. Treatment should be suspended periodically to assess the child's condition.

NB: methylphenidate is a schedule 2 controlled drug. Prescribers must ensure compliance with controlled drug writing requirements – If uncertain please contact a pharmacist to clarify prescription requirements.

The specialist may decide to prescribe if caution or co morbidities are apparent if the benefits outweigh the risk and would be documented in clinic letter.

Monitoring

Secondary Care Specialist baseline and annual: Height, weight, pulse, blood pressure, symptoms of suggestive heart disease, and appetite. Monitor for emergence/worsening of any psychiatric disorders.

Further monitoring should take place on a day the patient takes the medication.

GP annual review: Monitor and record blood pressure, any symptoms of suggestive heart disease, height, weight, and appetite. Monitor for emergence/worsening of any psychiatric disorders. Monitor for adverse drug reactions/interaction.

A useful reference might be – (*A guide to expected diastolic and systolic blood pressures for children and adolescents can be found in the Journal of Hypertension 2009, 27:1719-1742, or Arch Dis Child 2007; 92:298-303).*

NICE guidelines states secondary care specialist advise should be sought if drug treatment results in - sustained resting tachycardia (>120bpm), arrhythmia, or systolic blood pressure greater than the 95th percentile (or a clinically significant increase) measured on two occasions, or other significant adverse effects develops.

-If a child's height over time is significantly affected by medication (if they have not met the height expected for their age), as a planned break in treatment over school holidays may be required to allow 'catch-up' growth.

Contraindications (see BNF/BNFC for full list)

The MHRA states that methylphenidate is contraindicated in those with a diagnosis or history of severe depression, anorexia nervosa or anorexic disorders, suicidal tendencies, psychotic symptoms, mania, schizophrenia, severe mood disorders, or psychopathic or borderline personality disorder, severe and episodic (type I) bipolar (affective) disorder that is not well-controlled, pre-existing cerebrovascular disorders e.g., cerebral aneurysm and vascular abnormalities, including vasculitis or stroke. The MHRA also states that, unless specialist cardiac advice has been obtained, methylphenidate is contraindicated in 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 dysfunction of cardiac ion channels. The presence of marked anxiety, agitation or tension is a contra-indication to the use of methylphenidate. It is also contra-indicated in patients with drug or alcohol dependence, motor tics (although in mild cases the prescriber may decide to prescribe if the benefits outweigh the risk), tics in siblings, or a family history or diagnosis of Tourette's syndrome. Methylphenidate is contra-indicated in patients with hyperthyroidism, severe angina pectoris, glaucoma, and thyrotoxicosis or known sensitivity to methylphenidate/ excipients. It is **cautioned** in those whose medical conditions may be compromised by increases in blood pressure/heart rate. It is contraindicated in combination with **monoamine oxidase inhibitors**

(MAOIs) or within 14 days of treatment. Methylphenidate is not recommended for use in children with known structural cardiac abnormalities, as sudden death has been reported. It is cautioned in epilepsy (discontinue if increased seizure frequency). Methylphenidate should not be used in children under 6 years of age, since safety and efficacy has not been established. It should not be used to treat severe exogenous or endogenous depression. Reports of suicidal ideation or suicidal intent have been received.

Side Effects (see BNF/BNFC for full list)

Sleeping difficulties (especially if medication is given late in day), decreased appetite, stomach aches, nausea, vomiting, dry mouth, headaches, transient depression of mood, nervousness, drowsiness, agitation, irritability, tachycardia and rash. Other adverse effects which require careful monitoring: changes in blood pressure (see above under monitoring) and heart rate (usually increased), growth retardation may occur during prolonged therapy, isolated cases of leucopenia, thrombocytopenia and anaemia have been reported, occasionally increased seizure frequency and development of tics.

Drug Interactions (see BNF/BNFC for full list)

Methylphenidate may inhibit the metabolism of anticoagulants, some anticonvulsants (phenobarbital, phenytoin, primidone), phenylbutazone, tricyclic antidepressants and sympathomimetics. It should be used with caution in patients being treated with pressor agents. **See above for MAOIs**.

Cost

At current prices (Drug Tariff 2019) one year's treatment costs:
methylphenidate 10 mg three times daily £143

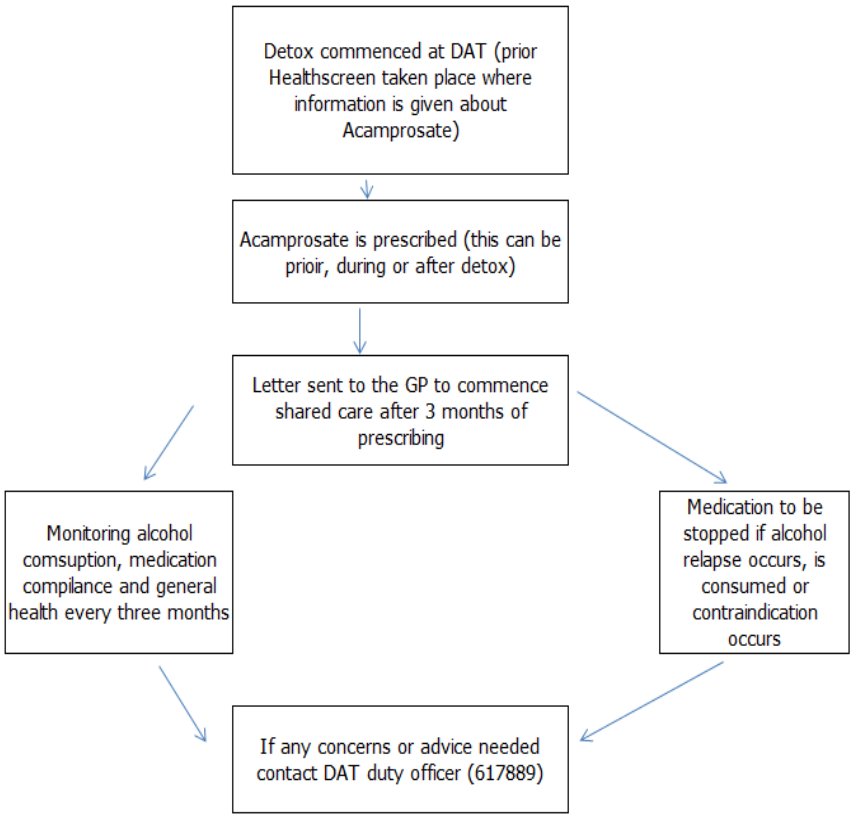
Concerta XL®36 mg once daily £551, Equasym XL® 30 mg once daily £455, Medikinet XL® 30 mg once daily £438 (cBNF online accessed 28/10/2021) Xaggitin XL 36mg once daily (£276 BNF online NHS indicative price accessed 28/10/2021)

References

- MTRAC verdict and summary sheet VS02/18. Summary of product Characteristics (accessed 17/09/2009): Ritalin®, Concerta XL®, Equasym®, Equasym XL®, Medikinet®, Medikinet XL®.
- NICE Technology Appraisal 98. Methylphenidate, atomoxetine and dexamfetamine for attention deficit hyperactivity disorder (ADHD) in children and adolescents BNF for Children 2009
- Drug Safety Update Volume 2 Issue 6 March 2009 MHRA www.mhra.gov.uk Drug Tariff December 2019 cBNF online accessed 02/12/19

APPENDIX C

Acamprosate in Adults



Licensed indications

Therapy to maintain abstinence in alcohol-dependent patients. It should be combined with counselling, which the patient will be directed to when initiation of the medication is started. This is often given via the Moti8 service.

Dosage and administration

- **Adults weighing 60kg or more**: 2 tablets three times daily with meals (2 tablets morning, noon and night) in subjects weighing 60kg or more.
- **Adults weighing less than 60kg**: 4 tablets divided into three daily doses with meals (2 tablets in the morning, 1 at noon and 1 at night).
- Treatment with acamprosate should be initiated if a patient is undergoing an alcohol detox with DAT Following the detox some patients may choose to stop the Acamprosate but many wish to continue this long term. Acamprosate should not be administered to children.

Monitoring

- **Secondary Care Specialist baseline and annual**:**:** Specialist: Monitoring by the consultant on a minimum of 3 month initially with a view to continue or discontinue the treatment, then monitored by GP.
- **GP Annual Review**: Monitor the alcohol consumption, medication compliance and general health on a three monthly basis.

Contra-indications (see BNF for full list)
Acamprosate is contra-indicated in patients with a known hypersensitivity to the drug, in pregnant and lactating women, in cases of renal insufficiency (serum creatinine >120 micromol/L) or in cases with severe hepatic failure (Childs- Pugh Classification C)
Cautions (see BNF for full list)
Acamprosate does not prevent the harmful effects of continuous alcohol abuse. Continued alcohol abuse negates the therapeutic benefit. Because the interrelationship between alcohol dependence, depression and suicidality is well-recognised and complex, it is recommended that alcohol-dependent patients, including those treated with acamprosate, be monitored for such symptoms.
Side Effects (see BNF for full list)
• Diarrhoea, abdominal pain, nausea, vomiting, flatulence, and sexual dysfunction • Acamprosate does not have black triangle (▼) status. All serious suspected adverse reactions (even well recognised or causal link uncertain) should be reported to the MHRA.
Drug Interactions (see BNF for full list)
• **(see also above under cautions):** The concomitant intake of alcohol and acamprosate does not affect the pharmacokinetics of either alcohol or acamprosate. • Administering acamprosate with food diminishes the bioavailability of the drug compared with its administration in the fasting state. • Pharmacokinetic studies have been completed and show no interaction between acamprosate and diazepam, disulfiram or imipramine. • There is no information available on the concomitant administration of acamprosate with diuretics.
Cost
At current prices, one year's treatment costs:£459 for person >60kg in weight for acamprosate 200 mg 2 tablets tds
References
Summary of Product Characteristics. Acamprosate ® Mylan. Last updated June 2017

APPENDIX D

Atomexetine in Children

Licensed indications

Licensed for the treatment of Attention-Deficit/Hyperactivity Disorder [ADHD] in children of 6 years and older, in adolescents and in adults as part of a comprehensive treatment programme. Atomoxetine use should not be considered as first line (see NICE guideline NG87 for recommended pharmacological treatment options).

Dosage and Administration

- Atomoxetine is normally given as a single dose in the morning. Patients who do not achieve a satisfactory clinical response (tolerability [e.g., nausea or somnolence] or efficacy) when taking atomoxetine as a single daily dose might benefit from taking it as twice daily evenly divided doses in the morning and late afternoon or early evening. In some cases it might be appropriate to continue treatment into adulthood. Consideration should be given to dose reduction or interrupting therapy in patients who are not growing or gaining weight satisfactorily. In cases of significant adverse effects, atomoxetine may be stopped abruptly; otherwise the drug may be tapered off over a suitable time period.
- Dosing up to 70 kg Body Weight: Initiate at a total daily dose of approximately 0.5mg/kg. This dose should be maintained for a minimum of 7 days before upward dose titration according to clinical response and tolerability. The recommended maintenance dose is approximately 1.2mg/kg/day (depending on the patient's weight and available dosage strengths of atomoxetine). No additional benefit has been demonstrated for doses higher than 1.2mg/kg/day.
- Dosing over 70 kg Body Weight: Initiate at a total daily dose of 40 mg. This dose should be maintained for a minimum of 7 days before upward dose titration according to clinical response and tolerability. The recommended maintenance dose is 80 mg. No additional benefit has been demonstrated for doses higher than 80 mg. The maximum recommended total daily dose is 100 mg.
- *Renal insufficiency:* Atomoxetine can be administered to ADHD patients with end-stage renal disease or lesser degrees of renal insufficiency using the usual dosing regimen. Atomoxetine may exacerbate hypertension in patients with end-stage renal disease.
- *Hepatic insufficiency:* For patients with moderate hepatic insufficiency (Child-Pugh Class B), initial and target doses should be reduced to 50% of the usual dose. For patients with severe hepatic insufficiency (Child-Pugh Class C), initial dose and target doses should be reduced to 25% of usual dose.
- *Metabolic Insufficiency:* Patients with the genotype corresponding to a non-functional CYP2D6 enzyme (CYP2D6 poor metabolisers) have a several-fold higher exposure to atomoxetine when compared to patients with a functional enzyme and are therefore at higher risk of adverse events. A lower starting dose and slower up titration of the dose may be considered.

Monitoring

- **Secondary Care Specialist baseline and annual**:: Baseline (and after dose change) annual – Evaluation of cardiovascular function (including blood pressure, pulse), weight and height; also any adverse effect on cognition or sexual maturation during long term therapy; for appearance or worsening of anxiety symptoms, depressed mood and depression, suicide related behaviour or tics.
- **GP Annual Review**: annual (in between Specialist appointments) – Evaluation of cardiovascular function (including blood pressure, pulse), weight and height; for appearance or worsening of

anxiety symptoms, depressed mood and depression, suicide related behaviour or tics.(A guide to expected diastolic and systolic blood pressures for children and adolescents can be found in the Journal of Hypertension 2009, 27:1719-1742, or Arch Dis Child 2007; 92:298-303).

Contraindications (see BNF/BNFC for full list)

- Hypersensitivity to the active substance or to any of the excipients. Atomoxetine should not be used in combination with monoamine oxidase inhibitors (MAOI), or within 2 weeks of discontinuing MAOI. Treatment with MAOI should not be initiated within 2 weeks after discontinuing atomoxetine.
- Atomoxetine should not be used in patients with narrow-angle glaucoma.
- Atomoxetine should not be used in patients with severe cardiovascular conditions (these may include severe hypertension, heart failure, arterial occlusive disease, angina, haemodynamically significant congenital heart disease, cardiomyopathies, myocardial infarction, potentially life-threatening arrhythmias and channelopathies or cerebrovascular disorders (these may include cerebral aneurysm or stroke).
- Atomoxetine should not be used in patients with pheochromocytoma or a history of this.

Cautions (see BNF/BNFC for full list)

- Monitor carefully for the appearance or worsening of suicide-related behaviour. Patients who are being considered for treatment should have a careful history and physical exam to assess for the presence of cardiac disease, and should receive further specialist cardiac evaluation if initial findings suggest such history/disease. Atomoxetine should only be used with caution in patients with known serious structural cardiac abnormalities in consultation with a cardiac specialist.
- Use with caution in patients whose underlying medical conditions could be worsened by increases in blood pressure and heart rate, e.g. patients with hypertension, tachycardia, or cardiovascular or cerebrovascular disease.
- Patients who develop symptoms such as palpitations, exertional chest pain, unexplained syncope, dyspnoea or other symptoms suggestive of cardiac disease during atomoxetine treatment should undergo a prompt specialist cardiac evaluation.
- Use with caution in patients with congenital or acquired long QT or a family history of QT prolongation or in any condition that may predispose patients to hypotension or conditions associated with abrupt heart rate/blood pressure changes. Patients with additional risk factors for cerebrovascular conditions (e.g. history of cardiovascular disease, concomitant medications that elevate blood pressure) should be assessed at every visit for neurological signs and symptoms. Very rarely, spontaneous reports of liver injury (manifested by elevated hepatic enzymes and bilirubin with jaundice) and very rarely, severe liver injury (including acute liver failure) have been reported.
- Discontinue atomoxetine in patients with jaundice or laboratory evidence of liver injury, and do not restart. Treatment-emergent psychotic or manic symptoms, e.g., hallucinations, delusional thinking, mania or agitation in patients without a prior history of psychotic illness or mania can be caused by atomoxetine at usual doses; If these occur, consider discontinuation of treatment.
- Atomoxetine may cause the exacerbation of pre-existing psychotic or manic symptoms. Monitor closely for the appearance or worsening of aggressive behaviour, hostility or emotional lability, anxiety symptoms, depressed mood, depression or tics.
- Atomoxetine should be introduced with caution in patients with a history of seizures.
- Discontinuation of atomoxetine should be considered if seizures occur or if there is an increase in seizure frequency where no other cause is identified.

- Consideration should be given to dose reduction or interrupting therapy in children and adolescents who are not growing or gaining weight satisfactorily.
- Clinical data do not suggest a deleterious effect of atomoxetine on cognition or sexual maturation; however long-term data is limited. Therefore, patients requiring long-term therapy should be carefully monitored.
- Although uncommon, allergic reactions, including anaphylactic reactions, rash, angioneurotic oedema, and urticaria, have been reported.

Side Effects (see BNF/BNFC for full list)

Refer to Summary of Product Characteristics (SPC) for full list – see references.

Very common: decreased appetite, headache, somnolence, abdominal pain, vomiting, nausea, blood pressure increased, increased heart rate.

Common: anorexia (loss of appetite), irritability, mood swings, insomnia, agitation, anxiety, depression and depressed mood , tics, dizziness, mydriasis, constipation, dyspepsia, dermatitis, pruritis, rash, fatigue, lethargy, chest pain, decreased weight.

Uncommon: suicide-related events, aggression, hostility, emotional lability, psychosis (including hallucinations), syncope, tremor, migraine, paraesthesia, hypoaesthesia, seizure , blurred vision, palpitations, sinus tachycardia, QT interval prolongation, dyspnoea, blood bilirubin increased, hyperhydrosis, allergic reactions, asthenia.

Rare: Raynaud's phenomenon, abnormal/increased liver function tests, jaundice, hepatitis, liver injury, acute hepatic failure, urinary hesitation, urinary retention, priapism, male genital pain.

Atomoxetine does not have black triangle (▼) status. All serious suspected adverse reactions (even well recognised or causal link uncertain) should be reported to the MHRA.

Drug Interactions (see BNF/BNFC for full list)

(see also above under cautions):

- Atomoxetine should not be used with MAOIs (see contra-indications). Lower dosage of atomoxetine may be necessary in patients who are already taking CYP2D6 inhibitor drugs e.g. fluoxetine, paroxetine, quinidine, terbinafine.
- If a CYP2D6 inhibitor is prescribed/discontinued after stabilisation of atomoxetine dose, adjustment of dose may be required to ensure efficacy/tolerability.
- Caution when combining atomoxetine with potent inhibitors of cytochrome P450 enzymes other than CYP2D6 in patients who are poor CYP2D6 metabolisers (risk of clinically relevant increases in atomoxetine exposure in vivo is unknown).
- Atomoxetine should be administered with caution to patients treated with high dose nebulised/systemically administered salbutamol (or other beta2 agonists) because cardiovascular effects can be potentiated.
- Increased risk of QT interval prolongation when atomoxetine is administered with other QT prolonging drugs (e.g. antipsychotics, class IA and III anti-arrhythmics, moxifloxacin, erythromycin, methadone, mefloquine, tricyclic antidepressants, lithium, or cisapride), those that cause electrolyte imbalance (such as thiazide diuretics), and those that inhibit CYP2D6.
- Caution is advised with concomitant use of medicines known to lower the seizure threshold (e.g. tricyclic antidepressants, SSRIs, neuroleptics, phenothiazines or butyrophenone, mefloquine,

chloroquine, bupropion or tramadol); caution is advised when stopping concomitant treatment with benzodiazepines (potential withdrawal seizures).
- Atomoxetine may decrease the effectiveness of anti-hypertensive drugs.
- Attention should be paid to monitoring of blood pressure and review of treatment of atomoxetine or anti-hypertensive drugs may be justified in the case of significant changes of blood pressure; use cautiously with pressor agents or medications that may increase blood pressure.
- Drugs that affect noradrenaline should be used cautiously when co-administered with atomoxetine because of the potential for additive or synergistic pharmacological effects e.g. antidepressants, such as imipramine, venlafaxine, and mirtazapine, or the decongestants pseudoephedrine or phenylephrine.

Cost

At current prices one year's treatment will cost £884 for 80 mg once daily (Drug Tariff December 2019)

Back up Advice and Support

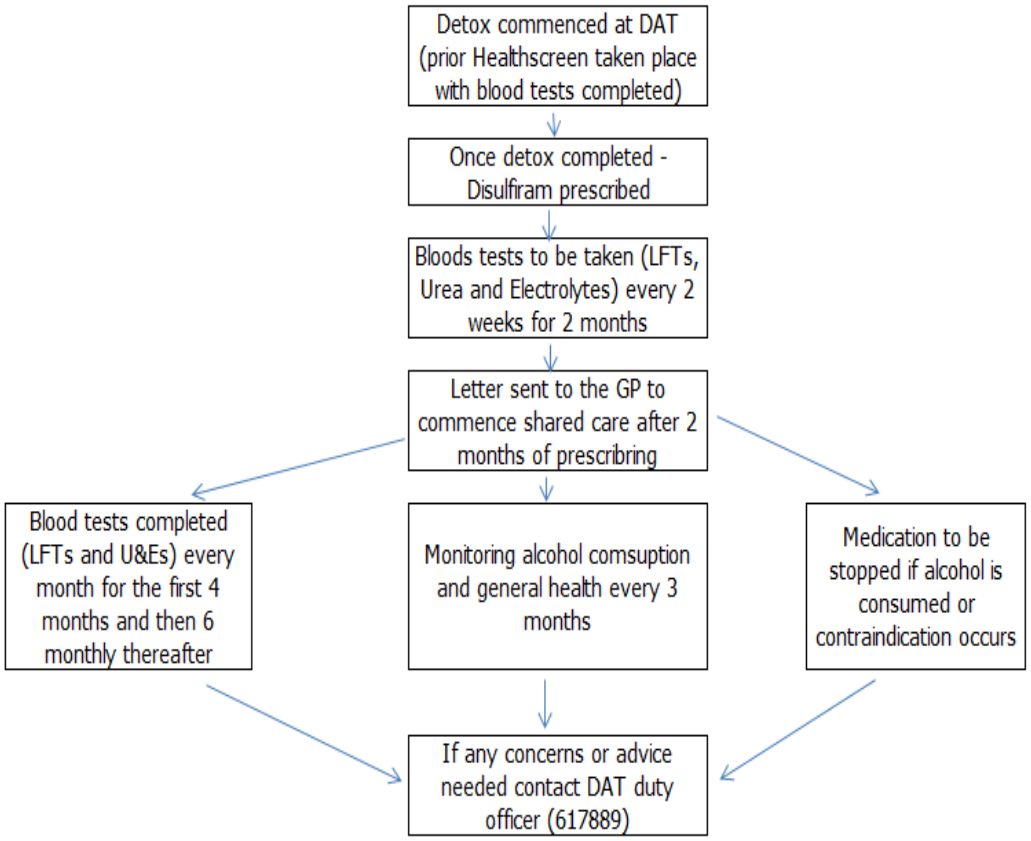
See shared care request letter at the end of this agreement, and patient clinical summary letter for contact details of clinician(s) initiating and stabilising patient prior to request for shared care.

References

- SPC Strattera. www.medicines.org.uk accessed 17/12/19
- https://www.gov.uk/drug-safety-update/atomoxetine-strattera-increases-in-blood-pressure-and-heart-rate#further-information
- https://bnfc.nice.org.uk/drug/atomoxetine.html#indicationsAndDoses accessed 24/12/19
- NICE Guideline NG87. Attention deficit hyperactivity disorder: diagnosis and management March 2018 www.nice.org.uk/guidance/ng87

APPENDIX E

Disulfiram in Adults



Licensed indications

- As an adjuvant in the treatment of carefully selected and co-operative patients with drinking problems.
- Its use must be accompanied by appropriate supportive treatment.

Dosage and Administration

- Suitable patients should not have ingested alcohol for at least 24 hours and must be warned that a Disulfiram-alcohol reaction is potentially dangerous, they can be life threatening, and include nausea, flushing, palpitations, arrhythmias, hypotension, respiratory depression and coma.
- Standard local practice is to start on disulfiram 200 mg once daily, this can be increased if necessary to 500mg daily. Subsequently, daily dosing should continue, but no longer than six months without review [1, 2].
- Patients will have been told NOT to drink for at least 14 days after stopping Disulfiram

Monitoring:

- **Secondary Care Specialist baseline and annual**:: Before starting treatment with disulfiram, test liver function, urea and electrolytes to assess for liver or renal impairment. The specialist would carry out the initial monitoring for the first two months, which would include blood tests

at least every 2 weeks.

- **GP Annual Review:** Shared care would then be assigned to the GP after two months, which would include a blood test (as stated above) each month for the following 4 months, and at least every 6 months thereafter. The monitoring of alcohol consumption and general health should be carried out on a monthly basis.

Contraindications (see BNF for full list)

Consumed alcohol within 24hrs. Presence of cardiac failure, coronary artery disease, previous history of CVA, hypertension, severe personality disorder, mental illness, suicidal risk or psychosis.

Cautions (see BNF for full list)

- Presence of acute porphyrias, **renal failure**, **hepatic** or **respiratory disease**, **diabetes mellitus** and **epilepsy**.
- Patients must not ingest alcohol **during or for 1 week after** ceasing disulfiram therapy.
- The risk/benefit ratio in assessing adverse effects of alcoholism in **pregnancy** should be taken into account when considering the use of disulfiram in pregnant patients. The use of disulfiram in the first trimester of **pregnancy** is not advised. There have been rare reports of congenital abnormalities in infants whose mothers have received disulfiram in conjunction with other medicines.
- Disulfiram should **not be used during lactation** (no information is available on whether disulfiram is excreted in breast milk, and there is a possibility of interaction with medicines that the baby may be taking).
- Patients must be warned of the unpredictable and potentially severe nature of a **disulfiram-alcohol reaction** as, in rare cases deaths have been reported following the drinking of alcohol by patients receiving disulfiram. The disulfiram-alcohol reaction can occur within 10 minutes of ingestion of alcohol and may last several hours. It is characterised by intense flushing, dyspnoea, headache, palpitations, tachycardia, hypotension, and nausea and vomiting**.**
- **Certain foods, liquid medicines, remedies, tonics, toiletries, perfumes and aerosol sprays** may contain sufficient alcohol to elicit a disulfiram-alcohol reaction and patients should be made aware of this. Caution should also be exercised with low alcohol and “non-alcohol” or “alcohol-free” beers and wines, which may provoke a reaction when consumed in sufficient quantities.

All personnel involved in the administration of disulfiram to the patient know that disulfiram should not be given during a drinking episode.

Side Effects (see BNF for full list)

During initial treatment, drowsiness and fatigue may occur; nausea, vomiting, halitosis and reduction in libido have been reported. If side effects are marked the dosage may be reduced. Psychotic reactions, including depression, paranoia,schizophrenia and mania occur rarely in patients receiving disulfiram. Allergic dermatitis, peripheral neuritis and hepatic cell damage have also been reported.

Drug Interactions (see BNF for full list)

Disulfiram may potentiate the toxic effects of **alcohol, anti-epileptic’s, anti-coagulants coumarins, phenindione and metronidazole. Risk of acute psychosis.**

Cost (annual)

At current prices one year’s treatment costs: £709.70 at a dose of 200 mg once daily

References:

- Joint Formulary Committee. British National Formulary (online) London: BMJ Group and Pharmaceutical Press; December 2019 Accessed 5/10/19 via https://www.medicinescomplete.com/mc/bnf/current/
- Brewer, C. (1984) How effective is the standard dose of disulfiram? A review of the alcohol-disulfiram reaction in practice. *British Journal of Psychiatry*, 144, 200-202.
- Chick, J. et al., (1992) Disulfiram treatment of alcoholism. British *Journal of Psychiatry*, 161, 84-89.
- National Institute for Health and Care Excellence(NICE) Alcohol-use disorders: diagnosis, assessment and management of harmful drinking (high-risk drinking) and alcohol dependence CG 115 February 2011

APPENDIX F

Lisdexamfetamine in Children

Licensed indications

Indicated as part of a comprehensive treatment programme for attention deficit/hyperactivity disorder (ADHD) in children aged 6 years of age and over when response to previous methylphenidate treatment is considered clinically inadequate.

Dosage and administration

- Lisdexamfetamine is a pharmacologically inactive prodrug. After oral administration, lisdexamfetamine is rapidly absorbed from the gastrointestinal tract and hydrolysed primarily by red blood cells to dexamfetamine.
- The starting dose for all patients is 30 mg once daily in the morning. NB If, in the judgment of the clinician, a lower initial dose is appropriate; patients may begin treatment with 20 mg once daily in the morning. This may be increased at approximately weekly intervals by 10 or 20 mg increments, to a maximum of 70 mg once daily. The lowest effective dose should be administered.
- Lisdexamfetamine may be taken with or without food. The capsules should 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. The contents should be stirred until completely dispersed. The patient should consume the entire mixture of soft food or liquid immediately; it should not be stored. The active ingredient dissolves completely once dispersed; however, a film containing the inactive ingredients may remain in the glass or container once the mixture is consumed. Afternoon doses should be avoided (risk of insomnia). If there is a missed morning dose, wait until the following morning before administering the next dose.
- Treatment should be stopped if the symptoms do not improve after 1 month at an appropriate dose. Reduce the dosage if paradoxical aggravation of symptoms/other intolerable adverse events emerge.

NB: **Lisdexamfetamine is a Schedule 2 Controlled Drug.** Prescribers must ensure compliance with controlled drug writing requirements Abuse liability- the SPC gives details of abuse liability studies which showed that lisdexamfetamine has less potential for abuse than dexamfetamine.

Monitoring

Ensure patient takes the medication on the day that monitoring will take place:

- **Secondary Care Specialist baseline and annual**: Height, weight, appetite, pulse and blood pressure; emergence of/worsening of pre-existing psychiatric disorders (also at dose change); risk of diversion/misuse/abuse.
- **GP annual review:** Height, weight, appetite, pulse and blood pressure; emergence of /worsening of pre-existing psychiatric disorders; risk of diversion/misuse/abuse . Monitor for adverse drug reactions/interactions.

Contra-indications (see BNF/BNFC for full list)
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.
Cautions (see BNF/BNFC for full list)
• In patients with a history of substance abuse or dependence; should not be used if there are known serious structural cardiac abnormalities or other serious heart problems, cardiomyopathy, serious heart rhythm abnormalities, or other serious cardiac problems that may place them at increased vulnerability to the sympathomimetic effects. • Caution is indicated in treating patients whose underlying medical conditions might be compromised by increases in blood pressure or heart rate. Cardiomyopathy has been reported. All patients should have a careful history (including assessment for a family history of sudden death or ventricular arrhythmia) and physical exam to assess for the presence of cardiac disease, and should receive further cardiac evaluation if findings suggest such disease. Patients who develop symptoms such as exertional chest pain, unexplained syncope, or other symptoms suggestive of cardiac disease during stimulant treatment should undergo a prompt cardiac evaluation. • Administration may exacerbate symptoms of behaviour disturbance and thought disorder in patients with pre existing psychotic disorders. Take particular care in patients with comorbid bipolar disorder. Screen patients with comorbid depressive symptoms to determine if they are at risk for bipolar disorder before lisdexamfetamine treatment is started. If treatment emergent psychotic or manic symptoms occur, consideration should be given to a possible causal role of the stimulant, and possible discontinuation of treatment. Patients beginning treatment for ADHD should be monitored for the appearance/worsening of aggressive behaviour or hostility. • Clinical evaluation for tics and Tourette's syndrome in children and their families should precede use. Growth should be monitored during treatment with stimulants, and patients who are not growing/ gaining weight as expected may need to have their treatment interrupted. In the presence of new onset or worsening seizures, lisdexamfetamine should be discontinued. Difficulties with accommodation and blurring of vision have been reported with stimulant treatment. Use with caution in patients taking other sympathomimetic drugs.
Side Effects (see BNF/BNFC for full list)
Common or very common: Abdominal cramps; aggression; decreased appetite; diarrhoea; dizziness; drowsiness; dry mouth; dyspnoea; growth restriction in children; headache; labile mood; malaise; mydriasis; nausea; pyrexia; sleep disturbances; tics; vomiting; weight loss ***Uncommon:*** Anorexia; anxiety; depression; dermatillomania; dysphoria; hallucination; hypertension; logorrhoea; mania; palpitation; paranoia; rash; restlessness; sexual dysfunction; sweating; tachycardia; tremor; visual disturbances ***Very rare*** Angle-closure glaucoma ***Frequency not known:*** Cardiomyopathy; choreoathetoid movements (in predisposed individuals); dyskinesia (in predisposed individuals); euphoria; seizures; Tourette syndrome (in predisposed

individuals)

Drug Interactions (see BNF/BNFC for full list)

- Amfetamines should not be administered during or within 14 days following the administration of **monoamine oxidase inhibitors (MAOI)** because they can increase the release of norepinephrine and other monoamines. This can cause severe headaches and other signs of hypertensive crisis. A variety of toxic neurological effects and malignant hyperpyrexia can occur, sometimes with fatal outcomes.
- **Chlorpromazine** blocks dopamine and norepinephrine receptors, thus inhibiting the central stimulant effects of amphetamines.
- **Haloperidol** blocks dopamine receptors, thus inhibiting the central stimulant effects of amphetamines. The anorectic and stimulatory effects of amphetamines may be inhibited by **lithium carbonate**.
- Amphetamines potentiate the analgesic effect of **narcotic analgesics**.
- Amphetamines may decrease the effectiveness of **guanethidine** or other **antihypertensive** medications.
- **Ascorbic acid** and other agents and conditions (diets high in fruits and vegetables, urinary tract infections and vomiting) that acidify urine increase urinary excretion and decrease the half-life of amphetamine.
- **Sodium bicarbonate** and other agents and conditions (**thiazide diuretics**, diets high in animal protein, diabetes, respiratory acidosis) that alkalinise urine decrease urinary excretion and extend the half-life of amphetamine.
- There are limited data on the possible interaction with **alcohol**.
- Amphetamines can cause a significant elevation in plasma **corticosteroid** levels. It may interfere with urinary steroid determinations.
- Serotonin syndrome has rarely occurred in association with the use of amphetamines such as lisdexamfetamine, when given in conjunction with serotonergic drugs, including selective serotonin reuptake inhibitors (SSRIs) and serotonin and noradrenaline reuptake inhibitors (SNRIs).
- *In vitro* experiments with human microsomes indicate minor inhibition of **CYP2D6** by amphetamine and minor inhibition of **CYP1A2, 2D6,** and **3A4** by one or more metabolites.
- Although the clinical significance of this interaction is likely to be minimal, consideration should be given when medications metabolised by these pathways are administered.

Cost

At current prices one year's treatment at 50 mg daily costs £894.25

References

1. SPC for Lisdexamfetamine dimesylate. Accessed 15/11/17

2. NICE Attention deficit hyperactivity disorder. Diagnosis and management of ADHD in children, young people and adults NICE CG72 (2008, modified March 2013)
3. BNFc https://bnfc.nice.org.uk accessed 15/11/17
4. (A guide to expected diastolic and systolic blood pressures for children and adolescents can be found in the Journal of Hypertension 2009,
5. 27:1719-1742, or Arch Dis Child 2007; 92:298-303

APPENDIX G

Melatonin for children

Licensed indications

Slenyto - Autism Spectrum Disorder (ASD) and/or Smith-Magenis syndrome only where sleep hygiene measures have been insufficient. All other products are not licensed for the use in children under 18yrs

Preparations

- Slenyto 1mg and 5mg prolonged release tablets
- Circadin 2mg prolonged release tablets
- Crushed Circadin 2mg prolonged release tablet
- Melatonin 1mg/ml oral solution – when using in children caution needs to be taken due to the safety of the excipients, the following excipients may be potentially problematic – propylene glycol and sorbitol

Dosage and administration

- For children and young adults aged 2 to 18 years: 2mg recommended starting dose – see individual formulation
- Dose increases can be made according to clinical response, up to maximum of 10mg/per day

Starting dose: 2mg:

- To be given 1 hour before bedtime

Duration:

- If no improvement observed within 3 months, review and consider withdrawing treatment. Further review with specialist every 6-12 months. Melatonin can be stopped suddenly without any side effects

Monitoring

- **Secondary Care Specialist baseline and annual**:: Initial monitor height and weight, informing the GP
- **GP Annual Review:** Standard monitoring of growth and sexual development is recommended, i.e. to check height, weight, and standard monitoring of pubertal development. Any concerns to be referred back to the consultant.

Contraindications (see BNF/BNFC for full list)

Hypersensitivity to the active substance or to any of the excipients.

Cautions (see BNF/BNFC for full list)

- Some reports suggest melatonin improves seizure control when used in patients with epilepsy; others indicate that it may worsen seizure control. When used in patients with epilepsy, it is important to closely monitor the effect of melatonin on seizure frequency
- Caution is advised in patients with renal disorders and melatonin should not be used in patients with liver disorders
- Autoimmune disease

Side Effects(see BNF/BNFC for full list)
Common or very common – Arthralgia, headaches, increased risk of infection, and pain **Uncommon** – anxiety, asthenia, chest pain, dizziness, drowsiness, dry mouth, gastrointestinal discomfort, hyperbilirubnaemia, hypertension, mood altered, movement disorders, nausea, skin rashes, weight increase, urine abnormalities, sleep disorders **Rare and very rare** – aggression, angina pectoris, arthritis, concentration impairment, crying, depression, disorientation, electrolyte imbalance, excessive tearing, GI disorders, haematuria, hypertriglyceridemia, leucopoenia, memory loss, muscle complaints, nail disorders, palpitations, paraesthesia, partial complex seizure. Please also refer to BNF and SPC for specific preparation.
Drug Interactions (see BNF/BNFC for full list)
Melatonin interacts with the following medications: Phenytoin, Combined hormonal contraceptives, Ritonavir, Leflunomide, Mexiletene, Ciprofloxacin, Rifampicin, Fluvoxamine, Teriflunomide.

APPENDIX H

Guanfacine in Children

Licensed indications

Guanfacine (Intuniv®) is indicated for the treatment of attention deficit hyperactivity disorder (ADHD) in children and adolescents 6-17 years old for whom stimulants are not suitable, not tolerated or have been shown to be ineffective. It must be used as a part of a comprehensive ADHD treatment programme, typically including psychological, educational and social measures. It should be initiated under the supervision of an appropriate specialist in childhood and/or adolescent behaviour disorder.

Preparations

Guanfacine is available as 1, 2, 3 or 4mg prolonged release oral tablets. It should not be crushed, chewed or broken before swallowing and therefore is only suitable for children who are able to swallow the tablet whole.

Dosage and Administration

- Prior to prescribing, a **baseline evaluation** should be undertaken to address **cardiovascular status** including blood pressure and heart rate, documenting comprehensive history of concomitant medications, past and present co-morbid medical and psychiatric disorders or symptoms, family history of sudden cardiac/unexplained death and accurate recording of **pre-treatment height and weight** on a growth chart. Careful **dose titration** and **monitoring** is necessary as risks for clinically significant adverse reactions (syncope, hypotension, bradycardia, somnolence and sedation) are dose- and exposure-related.
- Doses should be taken once daily at regular time (morning or evening). Should not be taken with a high fat meal.
- **Starting dose:** 1 mg, orally once a day. This may be increased at increments of 1mg per week, individualised according to response and tolerability. Recommended maintenance dose range is 0.05 to 0.12mg/kg/day. **Maximum dose** for child (aged 6-12 years, 25kg and above)) is 4 mg: maximum dose for adolescents (aged 13-17 years) is 4 mg (weight between 34 and 41.4kg), 5 mg (weight between 41.5to 49.4kg), 6 mg (weight between 49.5 to 58.4kg), 7mg (weight ≥ 58.5kg-following a thorough review of tolerability and efficacy after a minimum of 1 week of therapy on a 6 mg/day dose).
- **Missed dose;** if one dose is missed, resume treatment the next day; if 2 or more consecutive doses, retitrate based on the patient's tolerability to guanfacine.
- **Treatment should not be stopped abruptly** (may result in adverse blood pressure increases). Discontinue by no more than 1 mg every 3 to 7 days (manufacturer recommends monitoring blood pressure and pulse during this time).

Monitoring

Please ensure the patient has taken the medication on the day of monitoring

- **Secondary Care Specialist baseline and annual**:: Initial baseline evaluation and weekly monitoring for signs and symptoms of somnolence and sedation, hypotension and during dose titration. Monitor every 3 months during first year for signs and symptoms of somnolence and sedation, hypotension, bradycardia and weight increase/risk of obesity; then 6 monthly

thereafter (more frequently following any dose adjustments).

- **GP Annual Review :** Monitor annually for signs and symptoms of somnolence and sedation, hypotension, bradycardia and weight increase/risk of obesity.

Contraindications (see BNF/BNFC for full list)

Hypersensitivity to the active substance or to any of the excipients.

Cautions (see BNF/BNFC for full list)

Guanfacine can cause **syncope**, **hypotension** and **bradycardia**. Syncope may involve risks of falls or accidents. Caution is advised when treating patients who have a history of hypotension, heart block, bradycardia, or cardiovascular disease, or who have a history of syncope or a condition that may predispose them to syncope, such as hypotension, orthostatic hypotension, bradycardia, or dehydration. Caution is also advised when treating patients who are being treated concomitantly with antihypertensives or other medicinal products that can reduce blood pressure or heart rate or increase the risk of syncope. Patients should be advised to drink plenty of fluid. Guanfacine should be prescribed with caution in patients with a known history of **QT prolongation**, **risk factors for torsade de pointes** (e.g. heart block, bradycardia, hypokalaemia) or patients who are taking medicinal products known to prolong the QT interval. These patients should receive further cardiac evaluation based on clinical judgement. Guanfacine may cause **somnolence** and **sedation** predominantly at the start of treatment and could typically last for 2-3 weeks and longer in some cases. Patients are advised against operating heavy equipment, driving or cycling until they know how they respond to treatment with guanfacine. Patients with **emergent suicidal ideation or behaviour** during treatment for ADHD should be evaluated immediately by their physician. Treatment of an underlying psychiatric condition may be necessary and consideration should be given to a possible change in the ADHD treatment programme. Patients may show an **increase in their BMI**. NB See also **interactions** below.

Side Effects (see BNF/BNFC for full list)

- **Very common**: somnolence, headache, abdominal pain, fatigue.
- **Common**: decreased appetite, depression, anxiety, affect lability, insomnia, middle insomnia, nightmare, sedation, dizziness, lethargy, bradycardia, hypotension, orthostatic hypotension, vomiting, diarrhoea, nausea, constipation, abdominal/stomach discomfort, dry mouth, rash, enuresis, irritability, decreased blood pressure, increase in weight.

See SPC for full list.

Drug Interactions (see BNF/BNFC for full list)

The pharmacodynamic effect of guanfacine can have an additive effect when taken with other products known to cause sedation, somnolence, syncope, hypotension or QT prolongation (e.g. **alcohol, sedatives, hypnotics, benzodiazepines, barbiturates, antipsychotics**). The concomitant use of guanfacine with **QT prolonging** medicinal products is not recommended. Co-administration with **moderate** and **strong CYP3A4/5 inhibitors** e.g. **ciprofloxacin,** macrolide antibiotics **(e,g, erythromycin, clarithromycin**), **grapefruit juice, fluconazole and other azole antifungals** elevate plasma guanfacine concentrations and increases the risk of adverse reactions such as hypotension, bradycardia, and sedation (decrease in dose of guanfacine is recommended). When patients are taking guanfacine concomitantly with **a CYP3A4 inducer** e.g. **rifampicin, carbamazepine, phenytoin, phenobarbitone, some antiretrovirals**, an increase in the dose of guanfacine within the recommended dose range is recommended. There is the possibility of **additive CNS effects with**

valproic acid; consideration should be given to the monitoring of serum valproic acid concentrations. Adjustments in the dose of valproic acid and guanfacine may be necessary.
Cost
At current prices one year's treatment at 4mg per day costs £992.80 (manufacturer information).
References
SPC Intuniv (accessed 16/12/15 online www.medicines.org.uk)

APPENDIX I

Second Generation Antipsychotics in Children

Licensed indications

- Due to the range of licensed indications for the individual antipsychotics, they may be used to treat a number of different conditions, and may be used off licensed
- Dosage dependant on indication – always liaise with specialist

Preparations:

- Aripiprazole – tablets and liquid (liquid often used in children, due to the low dosage given)
- Quetiapine – only available in tablet form + liquid
- Risperidone – tablet and liquid form available

Monitoring:

- **Secondary Care Specialist baseline and annual**:: 6 monthly monitoring of pulse, blood pressure, weight waist circumference, random blood glucose, Hb1Ac, lipid profile, prolactin level and FBC. Clinicians need to be mindful of other general health conditions and checks such as full blood count, renal and liver function test may be carried out
- **GP Annual Review:** Enquire about any side effects and assess adherence with medication

Contraindications: (see BNF/BNFC for full list)

- Aripiprazole – Hypersensitivity to aripiprazole or other ingredients
- Quetiapine – Hypersensitivity of any ingredients, concomitant administration of CYP450 3A4 inhibitors (HIV- protease inhibitors, azole-antifungal agents, erythromycin, clarithromycin)
- Risperidone – Hypersensitivity to any ingredients

Cautions (see BNF/BNFC for full list)

Blood dyscrasias, cardiovascular disease, conditions predisposing to seizures, depression, diabetes (may raise blood glucose), epilepsy, history of jaundice, myasthenia gravis, Parkinson's disease, photosensitisation, prostatic hypertrophy, severe respiratory disease, susceptibility to angle- closure glaucoma.

Side Effects (see BNF/BNFC for full list)

- **Common or very common** – agitation, amenorrhoea, arrhythmias, constipation, dizziness, drowsiness, dry mouth, fatigue, galactorrhoea, gynaecomastia, hyperprolactinaemia, hypotension, insomnia, leucopenia, movement disorders, muscle rigidity, neutropenia, parkinsonism, postural hypotension, QT interval prolongation, rash, seizure, tremor, urinary retention, vomiting, weight increase.
- **Uncommon** – Agranulocytosis, confusion, embolism and thrombosis, neuroleptic malignant syndrome (discontinue – potentially fatal)
- **Rare and very rare** – sudden death

Please also refer to BNF and SPC for specific preparation.
Drug Interactions: Caution is needed with medication that may cause electrolyte imbalance or prolong the QTc interval. Dose adjustment of some antipsychotics may be necessary if co-prescribed with significant hepatic enzyme inducers or inhibitors e.g carbamazepine, fluvoxamine, fluoxetine, paroxetine, ketoconazole, itraconazole.