NHS
North East London

East London NHS Foundation Trust
North East London NHS Foundation Trust

North East London Shared Care Guideline for the Use of Methylphenidate, Dexamfetamine, Lisdexamfetamine dimesylate and Atomoxetine for the Management of Attention-deficit Hyperactivity Disorder (ADHD) in Adult Patients

Document control	
Version	1
Produced by	Yasmine Korimbux & North East London ADHD Working Group
Approved by	North East London Formulary and Pathways Group
Date approved	04/07/2023
Ratified by	North East London Integrated Medicines Optimisation and Prescribing Group
Date ratified	25/07/2023
Review date	25/07/2026

Contents

SCG AGREEMENT REQUEST FORM - TO BE UPLOADED INTO ELECTRONIC RECORDS AND FILED IN PATIENT NOTES

To be completed by the specialist initiating the treatment	
GP Practice Details: **Name: ……** **Address: ……** **Tel no: ……** **Mob no: ……** **NHS.net e-mail: ……**	**Patient Details:** **Name: ……** **Address: ……** **DOB: ……** **Tel number: ……** **NHS number (10 digits): ……**
Specialist name: …… CMHT/PCN: …….. **Contact details:** **Address: .....** **Tel no: …… Mob no: ……** **NHS.net e-mail: ……**	
Diagnosis: ……	**Medicines to be prescribed by GP (include drug name, form, dose and frequency)** **……..**
Date of first prescription by specialist: …… **Estimated date for prescribing to be continued by GP: ……**	

Agreement to Shared Care to be signed by GP and Specialist <u>before</u> prescribing is transferred to GP
Specialist Signature ……... **Date ……**
GP Signature ……... **Date ……**
Discussed with Patient …… **Date ……**

1. Introduction

ADHD is a neurodevelopmental condition that manifests as cognitive and behavioural deficits. It is characterised by core symptoms of persistent hyperactivity, impulsiveness and inattention. As well as presence of core symptoms identified, there must be clear evidence of psychological, social and/or educational or occupational impairment plus some impairment in two or more settings (home, at work, social, occupational).

As adolescents mature, a significant proportion will acquire the necessary skills to be able to manage without medication. However, some adolescents will still endure significant impairment due to ADHD, and will continue to need medication during the transition into adulthood, and during adult life.

ADHD is thought to be a persistent condition, and a diagnosis should only be made by a Specialist Psychiatrist or appropriately qualified healthcare professional with training and expertise in the diagnosis of ADHD.

For a diagnosis of ADHD, symptoms of hyperactivity/impulsivity and/or inattention should:

- Meet the diagnostic criteria DSM-5 or ICD-11 (hyperactivity) **and**
- Cause at least moderate psychological, social and/or educational or occupational impairment based on interview and/or direct observation in multiple settings **and**
- Be pervasive, occurring in 2 or more important settings including social, familial, educational and/or occupational settings.
- As part of the diagnostic process, include an assessment of the person's needs, coexisting conditions, social, familial and educational or occupational circumstances and physical health.

NICE Guideline NG87 (Attention deficit hyperactivity disorder: diagnosis and management on the treatment of ADHD) recommend that drug treatment of ADHD should form part of a comprehensive treatment programme that focuses on psychological, behavioural and educational or occupational needs.

2. Guidance Overview

The remit of this guideline is to provide guidance on the shared care of adults who may be prescribed atomoxetine, dexamfetamine, lisdexamfetamine and methylphenidate (preparations) as per NICE Guideline NG87 in the following scenarios:

1) **Continuation** of therapy via a shared care guideline for adult patients who have been newly diagnosed with ADHD and who have been initiated on treatment by the Specialist either directly or after referral to a Specialist local ADHD clinic[1] / Tertiary centre (e.g. Maudsley).
2) **Continuation** of therapy via a shared care guideline for "existing" adult patients who have been under the care of a Specialist local ADHD clinic / Tertiary centre or and who have now been transferred back to the care of a local Secondary care Specialist
3) **Continuation** of therapy via a shared care guideline for patients who have been prescribed ADHD medication under the Children and Adolescent Mental Health Service (CAMHS) and who have now been transferred to the adult service**.**

[1] Specialist Local ADHD Clinic e.g. local dedicated ADHD clinic and has referrals screened by community or other mental health services ('secondary care')

4) Restricted Criteria for Private patients or those initiated on ADHD treatment abroad

a) GP's are not encouraged to utilise this shared care agreement for private patients, however, may make individual decisions for each patient whether to agree to a shared care agreement and therefore could employ a Memorandum of Understanding (MoU) for private prescribing as a formal agreement.

b) A Memorandum of Understanding (MoU) can be used for shared care agreements of stable patients between private Specialists and GP under the GP's discretion of competency and the individual basis of each patient.

This shared care guideline **excludes**:

a) Treatment of children and young people (6-17 years)
b) Treatment of children under 6 years

3. Treatment of ADHD in Adults

NICE Guideline NG87 states the following with respect to the treatment of ADHD in adults:

- Offer medication to adults with ADHD if their ADHD symptoms are still causing a significant impairment in at least one domain* after environmental modifications** have been implemented and reviewed.

  * **Domain** refers to areas of function, e.g. interpersonal relationships, education and occupational attainment, and risk awareness. (Ref NICE NG 87, pg. 63)
  ** **Environmental modifications** are changes made to physical environment in order to minimise the impact of a person's ADHD on their day-to-day life e.g. changes to seating arrangements, changes to lighting and noise optimising work or education to have shorter periods of focus with movement breaks etc. (Ref NICE NG 87 pg. 63)

- Consider non-pharmacological treatment for adults with ADHD who have:
  - Made an informed choice not to have medication
  - Difficulty adhering to medication
  - Found medication to be ineffective or cannot tolerate it

- Consider non-pharmacological treatment in combination with medication for adults with ADHD who have benefited from medication but whose symptoms are still causing a significant impairment in at least one domain.

NICE Guideline NG87 states the following with respect to medication choice for ADHD in adults:

- Offer lisdexamfetamine or methylphenidate as first-line pharmacological treatment for adults with ADHD.
- Consider switching to lisdexamfetamine for adults who have had a 6-week trial of methylphenidate at an adequate dose but have not derived enough benefit in terms of reduced ADHD symptoms and associated impairment.
- Consider switching to methylphenidate for adults who have had a 6-week trial of lisdexamfetamine at an adequate dose but have not derived enough benefit in terms of reduced ADHD symptoms and associated impairment.
- Consider dexamfetamine for adults whose ADHD symptoms are responding to lisdexamfetamine but who cannot tolerate the longer effect profile.
- Offer atomoxetine to adults if:
  - they cannot tolerate lisdexamfetamine or methylphenidate **or**
  - their symptoms have not responded to separate 6-week trials of

lisdexamfetamine and methylphenidate, having considered alternative preparations and adequate doses.
    - NB: Specialist clinic may prescribe as first line in specific at risk patient cohorts which include co-morbid substance use issues, history or risk of diversion

Do not offer guanfacine without advice from a Specialist local ADHD clinic / tertiary service.

4. Referral and Assessment Process

a) New Adult patients identified by GP as having possible ADHD

- GP to refer to local Adult Psychiatric Specialist for initial assessment. If drug therapy is indicated, the specialist will initiate therapy.
- Once ADHD assessment is completed by the local Adult Psychiatric Specialist, report will be sent back to the GPs.
- The local Adult Psychiatric Specialist who is initiating therapy should discuss with the patient and their family or carers (if applicable) about treatment options, including medication, treatment aims, available options, and alternative/additional interventions, side effects and the monitoring protocol.
- The possibility of having a treatment break/stopping medication and reasons should also be discussed.
- Care can be transferred from local Adult Psychiatric Specialist to the patient's GP via a shared care agreement once the patient has been established on a stable dose.

b) Existing adult patients who have been under the care of an out of area Specialist local / Tertiary centre (e.g., Maudsley) who have now been transferred back to the care of a local Secondary care Specialist

- Specialist local / Tertiary centre Specialist to discuss with the patient and their family or carers (if applicable) about continuation of treatment and arrange for the transfer of care to the local Secondary care Adult Psychiatric service.
- Specialist to accept the transfer of care from the Specialist local / Tertiary Centre and to initiate a shared care agreement for ongoing prescribing and monitoring with the patients GP.

c) Existing adult patients who have been under private care services and stable on ADHD medication

- If shared care/agreement exists between private services and GP, private psychiatrist to be contacted for queries and advice.
- If patient has been discharged from private services and wishes care to continue in the NHS, referral to local adult psychiatric service OR local ADHD Specialist clinic for queries and advice initially by the GP is appropriate.

d) Adult patients who were initiated on ADHD medication abroad

- For adult patients diagnosed and initiated on psychostimulants abroad, referral to local adult psychiatric service OR local ADHD Specialist clinic for review of diagnosis and advice is appropriate.
- GP to ensure that assessment documents from previous psychiatrist is available prior to referral to Specialist

e) CAMHS patients who transition into adult services

- CAMHS to inform secondary care Adult Psychiatric services of the details and history of the patient who is approaching his/her 18th birthday and who has been identified as someone who may require on-going support with ADHD.
- CAMHS to inform the GP of any decision to stop or alter the treatment plan prior to transition to adult services.
- Should on-going prescription of psychostimulants be considered necessary, GP to continue prescribing as per existing shared care agreement
- Specialist to initiate a new-shared care agreement for ongoing prescribing and monitoring with the patient's GP once patient has transitioned to adult services.
- Patients that need to continue on psychostimulants should be advised of the need for safe storage to prevent diversion and potential abuse.
- Patients should be reminded that although some medications may not be licensed in adult ADHD, it might continue to be effective and supported by NICE Guideline NG87.
- Only adolescents who show clear improvement with ADHD medication should be considered for on-going treatment as adults.

5. Referral Criteria and Physical Health Monitoring

Physical health monitoring is part of the referral criteria monitoring as per NICE Guideline NG87. Routine blood tests and ECGs are not currently recommended for people taking medication for ADHD unless there is a clinical indication.

For Adult patients suspected of having ADHD symptoms, GPs may be requested to complete necessary pre-treatment assessment as indicated (see appendix 2) prior to referral to Specialist. Specialists to ensure that full pre-treatment assessment has been completed prior to starting drug treatment.

6. Clinical Review and Deprescribing

To assist with clinically appropriate referrals, the Adult ADHD Self Report Scale (ASRS – see appendix 4) could be completed by the GP with the patient as part of the consultation process and to aid decision making. The Adult ADHD Self Report Scale (ASRS-v1.1) is a validated tool recognised by the World Health Organisation (WHO). There is no scoring but it is a qualitative tool for reviewing symptoms. Further details and a copy of the questionnaire can be found at https://www.hcp.med.harvard.edu/ncs/asrs.php

The ASRS scale can also be used by clinicians when reviewing patients as part of the annual review to determine effect of efficacy on patient's management of ADHD.
This can include: Comprehensive assessment of clinical need, benefits and side effects - considering views of patient and carers; the effect of missed doses, planned dose reductions and brief periods of no treatment and whether continuation is needed. It should also include monitoring of blood pressure, pulse and weight/height/BMI where appropriate.

Treatment breaks and stopping

The safety and efficacy of long-term use of these drugs have not been systematically evaluated in controlled trials. Long term treatment may be required and may continue as long as patient is benefitting from medication use.

Improvement may be sustained when the medicinal product is temporarily or permanently discontinued.

Treatment with these drugs should not be indefinite and therefore clinicians should evaluate the long-term usefulness of the medicinal product for the individual patient with trial periods off medication to assess the patient's functioning without pharmacotherapy.
It is recommended that these drugs be de-challenged at least once yearly to assess the condition. Patients can choose to try stopping the medication every 1-5 years depending on which medication is being used, with the guidance of the specialist clinic if required.
Some patients regularly use treatment breaks; stopping treatment on the weekends and resuming treatment on weekdays to coincide with work/life commitments.

Stopping or withdrawing treatment

Other criteria for considering stopping include:
• If there are adverse effects that necessitate stopping the medication
• If ADHD symptoms are judged to have resolved following specialist review
• The drug may be discontinued periodically (e.g. by stopping the drug for few days up to two weeks) to assess the patient's underlying ADHD symptoms as advised by the consultant/specialist team, but there is no stipulation in NICE guidance to do this on a regular basis, and it should be decided on a case by case basis. Patients also may decide to stop themselves periodically.

In cases of significant adverse effects, the drug treatment may be stopped abruptly. There is no specific guidance on withdrawing treatment. It would be sensible to taper off treatment using the dose increments (see Appendix 3) as guidance for withdrawal over a suitable period. Careful supervision is required during drug withdrawal as this may unmask depression as well as chronic over activity.

Start by halving the dose for a week or two; if the patient reports that all is well then stop the medication. If the symptoms return at the halfway point then do not proceed with complete withdrawal; the medication is still necessary. Perhaps the patient has learnt that their symptoms could be maintained on a lower dose and may request to continue the reduced dose. Advice can be sought from an adult psychiatric Specialist if necessary.
Ensure that the patient remains in contact when discontinuing medication and alerting the GP to problems as soon as they arise.

Restarting medication

The GP may restart (stimulants) or re-titrate (atomoxetine or guanfacine) after a period of non-compliance or a deliberate trial without medication where:
- The medication was previously of benefit
- Adverse ADHD symptoms remain
- After consideration of any changes in the patient's medical or social circumstances
- Less than one year has passed since it was discontinued

Advice from the specialist may be requested where required.

Dependence

There may be concerns about risk of dependency on ADHD medications leading to substance abuse. However, studies have shown that when taken as prescribed and monitored by a doctor, these medications are generally not addictive. ADHD medication can cause withdrawal effects which may increase the perceived idea these medications cause dependency.
There is evidence to suggest ADHD medication decreases the risk of substance misuse. However, the risk of addiction may increase when someone *misuses* ADHD medication. All clinicians should be vigilant of signs of diversion and misuse. Risk of misuse can be reduced by using modified-release preparations.

Practices may contact specialist secondary clinics for advice and guidance regarding withdrawal, weaning and stopping medication.

Further Information

During initiation, the specialist clinic will provide the patient with a patient information leaflet (PIL) and discuss it with them. The Royal College of Psychiatrists also have a PIL accessed here: ADHD in adults | Royal College of Psychiatrists (rcpsych.ac.uk)

In addition, a pharmaceutical company patient information leaflet (PIL) will be provided to the patient with each supply.

7. Shared Care Responsibilities

The aim of this document is to provide information to allow patients to be managed safely via transfer of prescribing and monitoring across the Primary and Secondary care interface. It assumes a partnership and an agreement between a hospital Specialist, GP and the patient/carer and sets out responsibilities for each party.

The intention to share care should be explained to the patient by the Specialist and accepted by the patient. Once, agreement has been reached with the patient, the Specialist should contact the GP and invite them to participate in a shared care arrangement.

Shared care should not be assumed if a response is not received. The Specialist should contact the patient's GP practice directly or the North East London Pharmacy and Medicines Optimisation Team (NEL PMOT) if they do not receive a response within the expected timeframe.

Patients stabilised on treatment are expected to be taken up by primary care. In situations where a GP is not able to participate fully with the shared care agreement, this will be discussed with the Specialist on a case by case basis.
The ICB may be contacted to facilitate shared care with a primary care GP. Under this shared care agreement, patients will be under regular follow up and this provides an opportunity to discuss drug therapy. Intrinsic to the shared care agreement is that the prescribing doctor should be appropriately supported by a system of communication and co-operation in the management of patients.
The doctor who prescribes the medicine has clinical responsibility for the drug and the consequences of its use.

SUMMARY OF ADULT SPECIALIST RESPONSIBILITIES

- For newly diagnosed adult patients, or where there has been a change in medication, carry out baseline assessments (see appendix 2), initiate treatment and prescribe until patient is stable. NICE Guideline NG87 recommends lisdexamfetamine or methylphenidate as first-line choices. Where more than one agent is considered suitable, the product with the lowest acquisition cost should be considered.
- The Adult Psychiatric Outpatient clinic will accept the transfer of patients from CAMHS who are approaching their 18th birthday and requires Specialist treatment and ongoing medication review.
- Following initiation of ADHD medication, titrate dose and once patient is stable, request shared care with GP.
- Assess for contraindications and cautions and interactions (see SPCs).
- Initiate and optimise treatment as outlined in section 5. Prescribe the maintenance treatment for at least 4 weeks and until optimised. Prescribe in line with controlled drug prescription requirements.
- Use shared decision-making approach; discuss the benefits and risks of the treatment with the patient and/or their carer and provide the appropriate counselling to enable the patient to reach an informed decision. Obtain and document consent. Provide an appropriate patient information leaflet.
- Ensure the patient and/or their carer (where involved) understands that treatment may be stopped if they do not attend for monitoring and treatment review.
- Send written correspondence to GP, detailing the dose and frequency of medication, any relevant test result, the next monitoring and the contact information is clearly documented. If prescribing long acting methylphenidate, prescribe by brand name (as different brands are not interchangeable).
- The Adult Mental Health local services outpatient clinic will continue to monitor and supervise the patient as per local protocol.
- Review the patient as appropriate and liaise with the GP should treatment be varied or discontinued.
- The Adult Mental Health local services outpatient clinic should advise female patients at the onset of treatment or at first visit (if transferred from another team / Hospital) that if they are breastfeeding, wish to conceive or if they become pregnant while taking medications that they should contact the Specialist as soon as possible to discuss treatment options.
- Determine the duration of treatment and frequency of review. After each review, advise primary care whether treatment should be continued, confirm the ongoing dose, and whether the ongoing monitoring remains appropriate. Trial discontinuations should be managed by the Specialist.
- Should medication no longer be considered necessary, the Adult Psychiatric outpatient clinic will advise the GP of an appropriate withdrawal regimen as ADHD medication should ideally be withdrawn slowly.
- Dose adjustment will usually be the responsibility of the initiating Specialist team unless directions have been specified in the medical correspondence to the GP. Ensure the patient has adequate supply of medication until GP supply can be arranged
- Report adverse events to the MHRA/CSM via Yellow card located in BNF or online www.yellowcard.gov.uk.
- Provide advice to primary care on the management of adverse effects if required.

SUMMARY OF GP RESPONSIBILITIES

- Share known cardiac risk including patient's family history with the Specialist on referral
- Complete the ADHD Self Reporting Scale (ASRS) as part of the referral to the specialised local ADHD services where required.
- Reply to the request for shared care as soon as practicable
- Prescribe ADHD treatment at the dose recommended. If prescribing long acting methylphenidate, prescribe by brand name (as different brands are not interchangeable).
- Adjust dose as advised by the Specialist.
- Prescribe in line with controlled drug prescription requirements.
- Assess for any contraindication, caution and interaction with any of the patients existing or new medications and in change with the patients' health status.
- If ADHD medication needs to be discontinued, contact the Specialist for advice on a withdrawal regimen if not provided already or if further advice is required.
- Conduct the required monitoring as outlined in Appendix 2. Communicate any abnormal results to the Specialist). ASRS may also be used as part of symptoms review.
- Contact the Specialist to discuss any significant changes in the patient's condition.
- Manage any adverse effects and discuss with Specialist team when required (Inform the Specialist if there is suspicion of abuse of stimulant ADHD medication. Medication requests for longer than a month (e.g. covering holidays) should be discussed with the Specialist if necessary and can be issued at the prescriber's discretion.
- Stop treatment and make an urgent referral for appropriate care if cerebral ischaemia, new or worsening seizures, or serotonin syndrome are suspected.
- To contact the Specialist team or perinatal team for an urgent review as soon as possible if a patient becomes pregnant or who wishes to plan a pregnancy.
- The GP may restart treatment following a treatment break and in conjunction with the specialist where appropriate.
- Report adverse events to the Specialist and the MHRA/CSM via Yellow card located in the current BNF or online www.yellowcard.gov.uk

SUMMARY OF PATIENTS RESPONSIBILITIES

- Report to the Specialist or GP if they do not have a clear understanding of the treatment.
- Share any concerns in relation to treatment with stimulants or atomoxetine.
- Inform Specialist or GP of any other medication being taken, including over-the-counter products.
- Inform community pharmacists that they are taking ADHD treatments before purchasing medication over-the-counter.
- Attend all hospital and GP appointments, including for monitoring of blood/pulse/weight.

- Take medicines as agreed and take steps to ensure that no doses are missed and to not share medicine with others.
- Ensure medication is stored correctly and safely, and be aware medication is only for personal use.
- Read the patient information leaflet included with the medication.
- Report to GP and Specialist if pregnant or breastfeeding (or planning to become pregnant).
- Inform GP and Specialist of any changes in addresses or telephone contact numbers.
- Report any adverse effects to Specialist or GP whilst taking ADHD medication.
- To inform DVLA of their diagnoses (If ADHD will affect ability to drive) and in cases to inform their vehicle insurance provider.
- Be aware that dexamfetamine can affect cognitive function and is subject to drug driving laws, therefore patients must ensure their ability to drive is not impaired before driving.
- Avoid alcohol during treatment, as it may make some side effects worse. Avoid recreational drugs.

8. ADHD medications

Methylphenidate or lisdexamfetamine are considered the stimulants of choice in the UK for adults with ADHD. Unless contraindicated, either immediate or modified release preparations of methylphenidate should be the first line choice of drug treatment. Modified–release preparations of methylphenidate are preferable to immediate release preparations as they pose less risk of abuse and improve adherence. If methylphenidate or lisdexamfetamine are ineffective or unacceptable, atomoxetine or dexamphetamine may be considered.

A summary of the licensed indications for each of the ADHD drugs is given below. For full up to date details and Licensing Information for ADHD drugs, clinicians should refer to individual Summary of Characteristics (SPCs) www.medicines.org.uk/emc or the most recent version of the electronic BNF; https://bnf.nice.org.uk

9. Summary of Licensing Indications

Methylphenidate

Methylphenidate is licensed for use in children aged 6 years of age and over. Methylphenidate is not licensed for use in adults with ADHD as per the SPC. However; it is acknowledged in practice it may be appropriate to continue treatment into adulthood. The various brands of modified-release methylphenidate available differ in proportions of immediate release and delayed release and are therefore not bio-equivalent. This should be taken into consideration when swapping brands, as they are not interchangeable. See Appendix 1 and Appendix 3 for further information. (Ref: Concerta XL® SPC).

Atomoxetine

Atomoxetine is licensed for the treatment of ADHD in children of 6 years and older, in adolescents and in adults as part of a comprehensive treatment programme. Treatment must be initiated by a Specialist in the treatment of ADHD, such as a paediatrician,

child/adolescent psychiatrist, or psychiatrist. When used in adults, the presence of symptoms of ADHD that were pre-existing in childhood should be confirmed. Atomoxetine should not be initiated when the verification of childhood ADHD symptoms is uncertain. (Ref: Strattera® SPC).

Dexamfetamine

Dexamfetamine is indicated as part of a comprehensive treatment programme for ADHD in children and adolescents aged 6 to 17 years when response to previous methylphenidate treatment is considered clinically inadequate. A comprehensive treatment programme typically includes psychological, educational and social measures. (Ref: Amfexa® SPC).

Lisdexamfetamine

Lisdexamfetamine is indicated as part of a comprehensive treatment programme for ADHD in children aged 6 years and over when response to previous methylphenidate treatment is considered clinically inadequate.
In adolescents whose symptoms persist into adulthood and who have shown clear benefit from treatment, it may be appropriate to continue treatment into adulthood (Ref: Elvanse® SPC).

10. Prescribing Information

a. For newly diagnosed adult patients commencing drug treatment, medication should be initiated by a Specialist Psychiatrist
b. Existing patients (either adults being transferred from Specialist local / Tertiary care to Secondary care or patients being transferred from CAMHS to adult services, medication should be continued as specified by Specialist local / Tertiary care Specialist / CAMHS team (as applicable).
c. Clinicians should refer to the current BNF/ SPCs and appendix 1 of this document for each drug for full information on dosage, contraindications / side effects / drug interactions etc.
d. Drug treatment should be continued for as long as clinically effective and reviewed annually to assess need for continued treatment. Effects of missed doses, planned dose reductions, and periods of no treatment should be evaluated.
e. As drug costs are subject to change, GPs will be advised of the most cost-effective preparations via OptimiseRx.
f. Prescribers must follow the schedule 2 controlled drugs requirements when prescribing methylphenidate, dexamfetamine or lisdexamfetamine as these drugs are schedule 2 controlled drugs. Atomoxetine is not classed as a schedule 2 controlled drug and normal prescription requirements apply. See appendix 5.
g. A prescription for methylphenidate, dexamfetamine or lisdexamfetamine requires:
    - the total quantity to be prescribed to be written in words and figures
    - a maximum supply of 28 days
    - signature in the prescriber's own hand writing where computer generated prescriptions are issued
    - use of indelible ink if prescription handwritten, signed and dated by prescriber, name and address of patient, form and strength of preparation, dose and frequency in the prescriber's own handwriting

- Advise on safe storage of medicines e.g. it is stored correctly and safely, and be aware medication is only for personal use. Patients must be warned to keep all medicines out of the reach of children. All patients should be advised to dispose of unwanted medicines by returning them to a supplier for destruction.

11. Contact Details

In case of any issues or queries with respect to shared care, GPs should contact the individual Specialist who has initiated therapy (details as stated on the initial clinical letter).

References

1. NICE guideline 87: Attention deficit hyperactivity disorder: diagnosis and management https://www.nice.org.uk/guidance/ng87

2. NICE pathway for treatment of Adults with ADHD; Sep 2013 http://pathways.nice.org.uk/pathways/attention-deficithyperactivity-disorder

3. BNF – June 2021

4. East London NHS Foundation Trust shared care guidelines for Methylphenidate, Atomoxetine, Dexamfetamine and Lisdexamfetamine for ADHD in Children & Young People (6-17 years). 2014

5. British Association for Psychopharmacology 2014; Evidence based guidelines for the pharmacological management of attention deficit hyperactivity disorder: Update on recommendations

6. Taylor D et al (2014). The Maudsley Prescribing Guidelines in Psychiatry .11th ed. London: Wiley

7. Pharmacological treatments for ADHD. Parker C. Progress in Neurology and Psychiatry 2009;13: 17-26. Doi 10.1002/pnp.128 http://www.progressnp.com/view/Mjk3Mzc1LpBLzExOTAxMS9udWxs/journalArticlePdf.html.

8. Barnet Enfield and Haringey Mental Health Trust shared care guidelines for Methylphenidate, Dexamfetamine and Atomoxetine in adults, 2010

9. Camden and Islington NHS Foundation Trust shared care guidelines for Methylphenidate, Dexamfetamine, Lisdexamfetamine and Atomoxetine in adults, 2015

10. Electronic Medicines Compendium – access to Summaries of Product Characteristics of Atomoxetine, Lisdexamfetamine, Methylphenidate http://www.medicines.org.uk/emc

11. Maudsley Prescribing in Psychiatry. 13th Edition page 496-499

12. East London NHS Foundation Trust shared care protocol for Methylphenidate, Dexamfetamine, Lisdexamfetamine dimesylate and Atomoxetine for the management of ADHD in Adults (18-64 years). City and Hackney and Tower Hamlet Directorates. 2021

13. ADDISS www.addiss.co.uk

Appendix 1: Summary of Main Features of Treatment Options for ADHD

THIS LIST IS NOT EXHAUSTIVE - PRESCRIBERS SHOULD REFER TO THE ELECTRONIC BNF AND SPC FOR FULL CLINICAL DETAILS

Treatment	**Atomoxetine**	**Methylphenidate Modified Release (e.g. Concerta XL® and Equasym XL®, Medikinet XL®)** **NB:** Delmosart® Prolonged Release Tablets and Xaggitin® XL Combined are bioequivalent branded generics of Concerta® XL	**Dexamphetamine Modified Release (Dexadrine®)**	**Lisdexamfetamine dimesylate (Elvanse Adult®)**
Duration of action	24 hours	**Concerta XL®** -12 hours **Equasym XL® -** 8 hours **Medikinet XL®** - 8 hours **Standard Release Methylphenidate (e.g. Ritalin®, Medikinet®)** <12hr	4- 24 hours	Elvanse® – 8 hours
Adverse Reactions For a complete list (including rare and very rare adverse effects), consult Summary of Product Characteristics or BNF	Appetite change, dry mouth, nausea, headache, insomnia, somnolence, Increased BP & HR, palpitations, tachycardia, QT prolongation, abdominal pain, dyspepsia constipation, dysuria or retention	Nervousness and insomnia, Decreased appetite, Headache, drowsiness, Abdominal pain, diarrhoea, nausea & vomiting, Tachycardia, arrhythmia, palpitations, hypertension Drug induced psychosis (e.g. hallucinations, restlessness) depression, mood swings	Aggressive behaviour, anxiety, confusion, delirium, depression, euphoria, insomnia, irritability, tics, night tremors Paranoia, psychosis Palpitations, tachycardia, cardiomyopathy, chest pain.	Insomnia, decreased appetite, headache, Anorexia, diarrhoea, upper abdominal pain, nausea Anxiety, agitation, libido decreased, dizziness, restlessness, tremor, fatigue, hyperhidrosis, Tachycardia, palpitations, increased BP Depression, tic, dysphoria, euphoria, mania, dyskinesia somnolence

	dysmenorrhoea, ejaculation disorder suicide-related events, aggression, hostility and emotional lability transient abdominal pain lost appetite. Liver injury, hepatitis. Seizure, psychosis (including hallucinations)			Blurred vision, vomiting, urticaria, rash, pyrexia Psychotic episodes, hallucinations, aggression, seizure
Special Precaution For a complete list (including rare and very rare adverse effects), consult Summary of Product Characteristics or BNF	Cardiovascular/ cerebral vascular disease. Liver damage. Allergic reactions, Seizures. Suicidal thoughts/ behaviour. Growth/development	Monitor blood pressure and full blood count; History of alcohol or drug dependence. Agitation or anxiety. History of epilepsy. Family history of tics or Tourette syndrome. Angle-closure glaucoma	Anorexia nervosa. History of epilepsy. Mild hypertension. Angle-closure glaucoma. History of tics or Tourette syndrome. Bipolar disorder.	Anorexia nervosa. History of epilepsy. Mild hypertension. Angle-closure glaucoma. History of tics or Tourette syndrome. Bipolar disorder. History of drug or alcohol dependence
Contraindications For a complete list (including rare and very rare adverse effects), consult Summary of Product Characteristics or BNF	Not to be used in combination with Monoamine Oxidase Inhibitors (MAOIs) or within 14 days of discontinuing the drugs. Narrow angle glaucoma. Severe cardiovascular or cerebrovascular disorders. History of phaeochromocytoma	Anorexia nervosa. Cardiovascular and cerebrovascular disease, Phaeochromocytoma. Psychosis, depression, suicidal ideation, unstable bipolar disease. Prolonged release preparations: dysphagia/ restricted gastro-intestinal lumen	Cardiovascular disease, (severe hypertension, arteriosclerosis, or cardiac abnormalities. Hyperthyroidism. History of alcohol or drug dependence During, or for 14 days after treatment with a Monoamine Oxidase Inhibitor (MAOI).	Symptomatic cardiovascular disease, structural cardiac abnormalities, moderate or severe hypertension, advanced arteriosclerosis, concomitant use or use within 2 weeks of MAOI, history of drug/alcohol abuse, hyperthyroidism, glaucoma, hyperexcitability, agitated states, pregnancy and lactation

Can be used in common ADHD comorbidities such as tics and Tourette's and marked anxiety	YES	NO	NO	Stimulants have been reported to exacerbate motor and phonic tics and Tourette's syndrome. Therefore, clinical evaluation for tics and Tourette's syndrome in children and their families should precede use of stimulant medications
Evidence of abuse potential	NO	YES	YES	YES
Controlled Drug	NO	YES	YES	YES
Ongoing Monitoring	Cardiovascular status should be regularly monitored with BP and pulse recorded after each adjustment of dose and then at least every 6 months. Current guidelines for hypertension should be followed.	Growth, psychiatric, and cardiovascular status should be continually monitored (Blood pressure and pulse should be recorded on a centile chart at each adjustment of dose and at least every six months. Development of *de novo* or worsening of pre-existing psychiatric disorders should be monitored at every adjustment of dose and then at least every six months and at every visit. Patients should be monitored by all Health Care Professionals (e.g. Specialists and GPs) for the risk of diversion, misuse, and abuse of methylphenidate/ dexamphetamine/ lisdexamfetamine		

Adjunctive treatment regime

Patients may also be prescribed melatonin by the GP on the advice of the Specialist ADHD team. Some patients may require the addition of an antidepressant for the treatment of depression or anxiety.

Appendix 2: Monitoring and Managing Adverse Effects (in line with current NICE Guideline NG87 guidance)

Parameter	Frequency of monitoring	Action	By Whom
Efficacy	At each appointment and when doses are changed	Rating scales such as Adult Self Report Scale (ASRS) may be used. See Appendix 4	GP and Specialist team
Non- specific side effects	At each appointment	Review and monitor adverse effects, possible drug interactions, changes to medication regime, deteriorating behaviour. Communicate any relevant medical information to consultant/GP.	GP and specialist team
Weight	Baseline, months 3 & 6, then 6 monthly thereafter	Consider monitoring of BMI of adults with ADHD. If there has been weight change; exclude other reason for weight change. • Give advice: take medication with or after food, not before • Additional meals or snacks early morning or late in the evening when stimulant effects have worn off • Obtaining dietary advice • Consuming high calorie foods of good nutritional value Discuss with Specialist if difficulty persists (dose reduction, treatment break, or a change in medication)	GP and specialist team
Pulse & Blood Pressure	Baseline, before and after dose change and then 6 monthly thereafter	Sustained resting tachycardia, arrhythmia or clinically significant high systolic blood pressure after two measurements. If there is any recent dose change- revert to previous dose and discuss with Specialist for ongoing management.	GP and specialist team

		In the absence of recent dose changes, reduce dose by half and discuss with Specialist or cardiologist for further advice.	
Full Blood Count (FBC) /Haematological Disorders	Baseline only if indicated (Methylphenidate)	Low threshold for repeat FBC rather than routine e.g. recurrent infections, purpuric rash or based on medical history Haematological disorders include leukopenia, thrombocytopenia, anaemia or other alteration.	GP and specialist team Contact Specialist team. Discontinuation should be considered. Referral to haematology may be warranted; use clinical discretion
Cardiovascular risk assessment	Baseline and throughout therapy	To include: enquiry about a history of cardiac symptoms such as syncope, breathlessness, palpitations, or congenital cardiac abnormalities, family diagnosis of cardiovascular disease/sudden cardiac death before the age of 40 years, auscultation for mumurs	GP and specialist team
ECG	Only if known or suspected history NB: a clinical decision whether ECG is required	If there are concerns or interpretation of results referral to cardiologist	GP and specialist team
Liver Function	Throughout therapy (Atomoxetine)	Be vigilant for abdominal pain, unexplained nausea, malaise, darkening of urine or jaundice. Routine testing of LFTs not recommended Discontinue atomoxetine in patients who develop jaundice or for whom there is laboratory evidence of liver injury (if unclear if injury or transient derangement, discuss urgently with Specialist).	GP and specialist team
Suicidal thinking, self- harming	During the initial months or after a change of dose	Patients and carers should be warned about the potential for suicidal thinking and self-harming	GP and specialist team

behaviour and other psychiatric symptoms	(Atomoxetine)	behaviour. Monitor for new or worsening psychiatric symptoms e.g. psychosis, mania, aggressive or hostile behaviour Stop treatment and consider referral to acute mental health team	
Risk assessment of substance misuse (diversion)	Baseline Throughout therapy	Enquire about known substance use in patient or that of close family member or carer. Concerns about requests for frequent prescriptions deemed unnecessary should be communicated to consultant/Specialist	GP and specialist team
Sexual dysfunction (Atomoxetine)	Throughout therapy	Be aware that young people and adults with ADHD may develop sexual dysfunction (i.e. erectile and ejaculatory dysfunction) as potential adverse effects of atomoxetine.	GP and specialist team
Gastrointestinal disorders (Atomoxetine)	Throughout therapy	Symptoms include abdominal, vomiting, nausea, constipation, dyspepsia; ensure advice on relationship with food is communicated and followed Review and provide advice on dosing; patients may benefit from taking atomoxetine in two equally divided doses (once in the morning, and once in the late afternoon or early evening). Generally, resolves.	GP and specialist team
Changes in sleep patterns	Throughout therapy	Monitor changes in sleep pattern (for example, with a sleep diary) and adjust medication accordingly. Review timing of dose and advise as appropriate. Give advice on sleep hygiene.	GP and specialist team Discuss with Specialist if difficulty persists; dose reduction may be required.

Seizures	Throughout therapy	If a person with ADHD develops new seizures or a worsening of existing seizures, Stop ADHD medication and GP to refer back to Specialist for review of ADHD medication. After investigation, the ADHD medication may be cautiously reintroduced if it is unlikely to be the cause of the seizures.	Specialist team
Tics	Throughout therapy	If a person taking stimulants develops tics, Specialist to consider whether: • The tics are related to the stimulant (tics naturally wax and wane) **and** • The impairment associated with the tics outweighs the benefits of ADHD	Specialist team
Symptoms of cerebral ischemia	Throughout treatment	Symptoms include severe headache, numbness, weakness, paralysis and impairment of coordination, vision, speech, language or memory. Discontinue ADHD medication and refer urgently for neurological assessment	Specialist team
Serotonin Syndrome	Throughout treatment	Symptoms include; agitation, hallucinations, coma, tachycardia, labile blood pressure, hyperthermia, hyperreflexia, incoordination, rigidity, nausea, vomiting, diarrhoea Discontinue treatment. Management depends on severity. Discuss with Specialist whether treatment can be restarted	Specialist team

		• The impairment associated with the tics outweighs the benefits of ADHD	
Symptoms of cerebral ischemia	Throughout treatment	Symptoms include severe headache, numbness, weakness, paralysis and impairment of coordination, vision, speech, language or memory. • Discontinue ADHD medication and refer urgently for neurological assessment	Specialist team
Serotonin Syndrome	Throughout treatment	Symptoms include; agitation, hallucinations, coma, tachycardia, labile blood pressure, hyperthermia, hyperreflexia, incoordination, rigidity, nausea, vomiting, diarrhoea Discontinue treatment. Management depends on severity. Discuss with Specialist whether treatment can be restarted	Specialist team

Appendix 3: Medication Dosing Summary

For full up to date details and Licensing Information for ADHD drugs, clinicians should refer to individual Summary of Characteristics (SPCs) www.medicines.org.uk/emc or the most recent version of the electronic BNF www.bnf.org/products/bnf-online/ https://bnf.nice.org.uk/

	Methylphenidate Immediate-release tablets	**Methylphenidate modified-release**			**Atomoxetine capsules**	**Lisdexamfetamine capsules**	**Dexamfetamine tablets**
Formulation	Ritalin® 10mg Medikinet®5mg 10mg ,20mg tablets	Equasym® XL 10,20,30mg capsules Immediate – release component (30% of dose), modified release component (70% of dose)	Concerta ® XL 18mg, 27mg, 36mg tablets Immediate – release component (22% of dose), modified release component (78% of dose)	Medikinet ® XL 5mg,10mg, 20mg, 30mg, 40mg capsules Immediate release component (50% of the dose) modified release component (50% of dose)	Strattera® 10mg,18mg, 25mg, 40mg, 60mg, 80mg, 100mg	Elvanse ® 30mg, 50mg, 70mg	Dexedrine® / Dexamfetamine 5mg
Indication & Dose	**Unlicensed**: Initial: 5mg 2 or 3 times a day. Titrate against symptoms and side effects at weekly intervals. Max: 100mg daily in 2-3 divided doses	**Unlicensed:** Initial: As per immediate release tablets, using an equivalent dose. If initiating with Equasym® XL, 10mg daily(before breakfast) adjusted at weekly	**Unlicensed:** Initial: As per immediate release tablets, using an equivalent dose. If initiating with Concerta® XL, use 18mg daily, adjusted at weekly intervals. Max 108mg daily	**Licensed only:** As part of comprehensive treatment programme for ADHD in adults who have shown clear benefit from treatment in childhood Initial: As per immediate release tablets, Using an equivalent dose.	**Licensed only:** As part of a comprehensive treatment programme for ADHD in adults who have shown clear benefit from treatment in childhood 40mg/day minimum of 7 days, then titrate as required. Dose can be split to twice daily	**Licensed only:** For ADHD in adolescents whose symptoms persist into adulthood and who have shown clear benefit from treatment, it may be appropriate to continue treatment into adulthood. Initial: 30mg once daily in	**Unlicensed:** Initial: 5mg once or twice a day (breakfast and lunch). Titrate against symptoms and side effects, increasing at weekly intervals as required. Max 60mg/day in 2-4 divided doses NB: liquid formulation is Black Triangle Drug)

		intervals Max 100mg daily Usually given once daily, but not more than twice daily	Usually given once daily, but not more than twice daily	If initiating with Medikinet® XL, use 10mg daily(with breakfast) For Adults new to Medikinet XL: Careful dose titration starting at 5mg once or twice daily (breakfast and lunch) adjusted at weekly intervals Max daily dose is 1mg/kg body weight to a maximum of 100mg daily Usually given	(morning and late afternoon/ early evening) Usual maintenance dose 80-100mg/day. SPC states: the safety of single doses over 120 mg and total daily doses above 150 mg have not been systematically evaluated.	the morning. Can be reduced to 20mg in the morning. Titrate according to response/tolerability. May be increased at weekly intervals by 10 - 20mg increments Max 70mg daily	

				once daily, but not more than twice daily	Max dose 120mg (unlicensed): The safety of single doses over 120mg and total daily doses above 150mg have not been systematically evaluated Once a day dose in the morning or 2 evenly divided doses (morning & late afternoon/early evening).If not tolerated/ inadequate response		
Controlled Drug	Yes	Yes	Yes	Yes	No	Yes	Yes
The brand of methylphenidate should be included on the prescription and Modified –release preparations are preferable to immediate release preparations as they pose less risk of abuse and improve adherence.							
Type of medication	Stimulant				Non-stimulant	Stimulant	Stimulant
Physical monitoring	See Appendix 2 Agree monitoring schedule with GP and consultant/Specialist for adults						
Interactions	For detailed information on interactions, cautions, contra-indications and side-effects, please refer to manufacturer's Summary of Product Characteristics (SPC) or www.medicines.org.uk, and also current BNF www.bnf.org/bnf						
	Warfarin Anti-convulsants Selected tricyclic and serotonin reuptake inhibitors Alcohol				Monoamine oxidase inhibitors Antihypertensive drugs Salbutamol CYP2D6 inhibitors (SSRI's, quinidine, terbinafine	Monoamine oxidase inhibitors Anti-hypertensive drugs Lithium carbonate Haloperidol	Monoamine Oxidase inhibitors

Appendix 4: Adult ADHD Self-Report Scale (ASRS-V1.1) Symptom Checklist

https://add.org/wp-content/uploads/2015/03/adhd-questionnaire-ASRS111.pdf

Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist Instructions

The questions on the back page are designed to stimulate dialogue between you and your patients and to help confirm if they may be suffering from the symptoms of attention-deficit/hyperactivity disorder (ADHD).

Description: The Symptom Checklist is an instrument consisting of the eighteen DSM-IV-TR criteria. Six of the eighteen questions were found to be the most predictive of symptoms consistent with ADHD. These six questions are the basis for the ASRS v1.1 Screener and are also Part A of the Symptom Checklist. Part B of the Symptom Checklist contains the remaining twelve questions.

Instructions:

Symptoms

1. Ask the patient to complete both Part A and Part B of the Symptom Checklist by marking an X in the box that most closely represents the frequency of occurrence of each of the symptoms.

2. Score Part A. If four or more marks appear in the darkly shaded boxes within Part A then the patient has symptoms highly consistent with ADHD in adults and further investigation is warranted.

3. The frequency scores on Part B provide additional cues and can serve as further probes into the patient's symptoms. Pay particular attention to marks appearing in the dark shaded boxes. The frequency-based response is more sensitive with certain questions. No total score or diagnostic likelihood is utilized for the twelve questions. It has been found that the six questions in Part A are the most predictive of the disorder and are best for use as a screening instrument.

Impairments

1. Review the entire Symptom Checklist with your patients and evaluate the level of impairment associated with the symptom.

2. Consider work/school, social and family settings.

3. Symptom frequency is often associated with symptom severity, therefore the Symptom Checklist may also aid in the assessment of impairments. If your patients have frequent symptoms, you may want to ask them to describe how these problems have affected the ability to work, take care of things at home, or get along with other people such as their spouse/significant other.

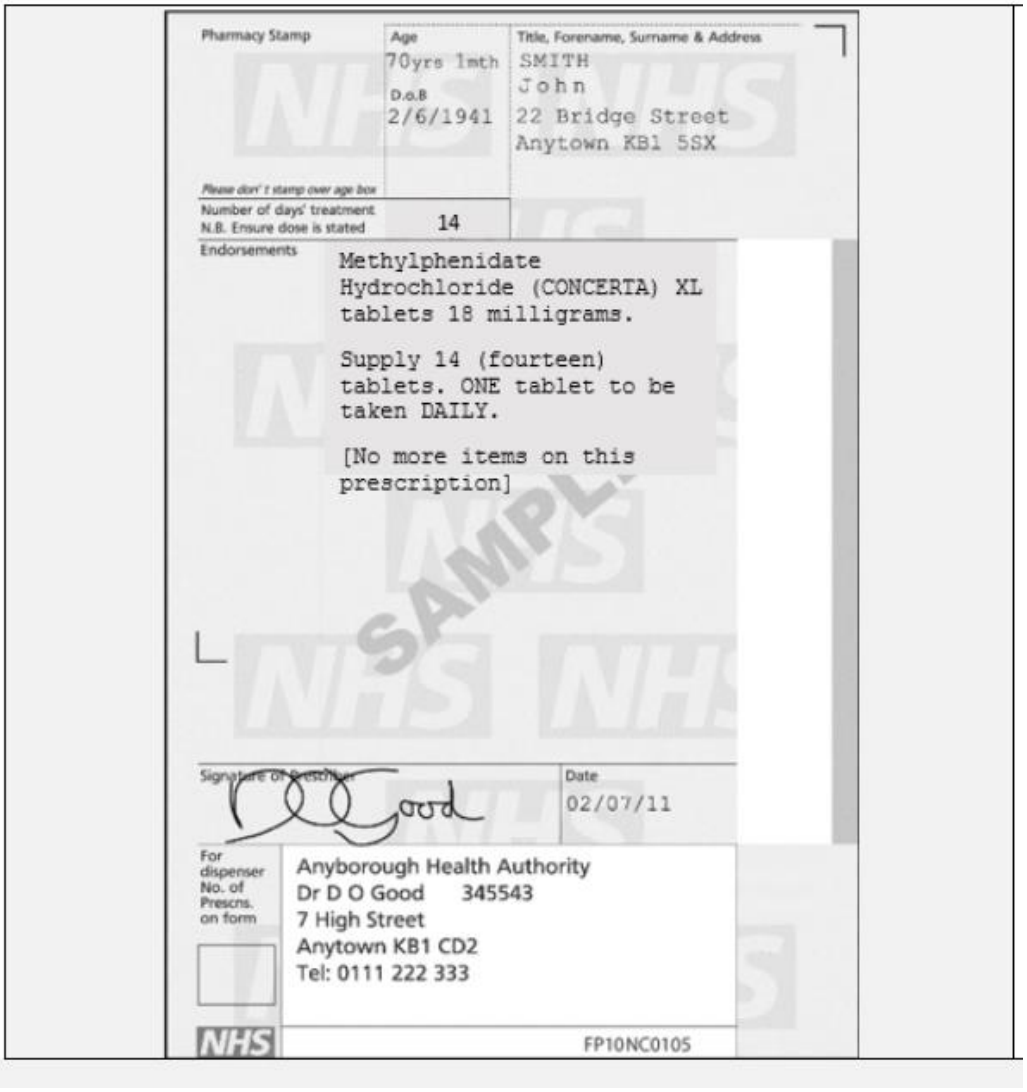
History

1. Assess the presence of these symptoms or similar symptoms in childhood. Adults who have ADHD need not have been formally diagnosed in childhood. In evaluating a patient's history, look for evidence of early-appearing and long-standing problems with attention or self-control. Some significant symptoms should have been present in childhood, but full symptomology is not necessary.

Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist

Patient Name		Today's Date					
Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an X in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give this completed checklist to your healthcare professional to discuss during today's appointment.			Never	Rarely	Sometimes	Often	Very Often
1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?							
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?							
3. How often do you have problems remembering appointments or obligations?							
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?							
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?							
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?							
							Part A
7. How often do you make careless mistakes when you have to work on a boring or difficult project?							
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?							
9. How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?							
10. How often do you misplace or have difficulty finding things at home or at work?							
11. How often are you distracted by activity or noise around you?							
12. How often do you leave your seat in meetings or other situations in which you are expected to remain seated?							
13. How often do you feel restless or fidgety?							
14. How often do you have difficulty unwinding and relaxing when you have time to yourself?							
15. How often do you find yourself talking too much when you are in social situations?							
16. When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish them themselves?							
17. How often do you have difficulty waiting your turn in situations when turn taking is required?							
18. How often do you interrupt others when they are busy?							

Appendix 5: Legal Requirements For Controlled Drug Prescription (Sched. 2 and 3)



Pharmacy Stamp

Age 70yrs 1mth
D.o.B 2/6/1941

Title, Forename, Surname & Address
SMITH
John
22 Bridge Street
Anytown KB1 5SX

Please don't stamp over age box

Number of days' treatment
N.B. Ensure dose is stated: 14

Endorsements

Methylphenidate Hydrochloride (CONCERTA) XL tablets 18 milligrams.

Supply 14 (fourteen) tablets. ONE tablet to be taken DAILY.

[No more items on this prescription]

SAMPLE

Signature of Prescriber: D O Good

Date: 02/07/11

For dispenser No. of Prescns. on form

Anyborough Health Authority
Dr D O Good 345543
7 High Street
Anytown KB1 CD2
Tel: 0111 222 333

NHS

FP10NC0105

1. **Signature of prescriber** – electronic signatures can be accepted only where electronic prescribing service (EPS) is used.
2. **Date**- Controlled drugs prescriptions are valid for 28 days after the appropriate date on the prescription (signature date or date of starting treatment)
3. **Address of prescriber**- within the UK
4. **Name of the medicine** – not a legal requirement but necessary to identify which medicine is being requested.
5. **Dose** – No need to be stated in words and figures but it must be clearly defined
6. **Formulation –** avoid abbreviations (i.e. "caps" or "tabs")
7. **Strength** – where a prescription requests multiple strengths, each strength should be prescribed separately
8. **Total quantity** – Must be written in both words and figures. If the medicine is in dosage units, the total quantity should be express of total number of dosage units. Liquids should be expressed in millilitres
9. **Quantity prescribed** – not to exceed 30 days' supply.
10. **Patient's name**
11. **Patient's address**

NOT LEGALLY ACCEPTED (as dose NOT CLEARLY indicated)

As directed, When required, PRN, As per chart, Titration dose
Weekly, Decrease dose by 3.5 ml every four days.