Royal Cornwall Hospitals
NHS Trust

# Modafinil Shared Care Guideline

# V4.0

# November 2023

# 1. Aim/Purpose of this Guideline

1.1. This guideline applies to medical, nursing and pharmacy staff in the safe and appropriate prescription and administration of modafinil when used in adults.

1.2. This shared care guideline sets out details for the sharing of care of adults with prescribed modafinil. These guidelines provide additional limited information necessary to aid in the treatment of these patients. As with all shared care guidelines they highlight relevant prescribing issues but should be used in conjunction with relevant NICE guidance, the BNF, ABPI summary of product characteristics and do not replace them.

1.3. This version supersedes any previous versions of this document.

**Data Protection Act 2018 (UK General Data Protection Regulation – GDPR) Legislation.**

The Trust has a duty under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

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# 2. The Guidance

2.1. Modafinil is licensed for adults for the treatment of excessive sleepiness associated with narcolepsy with or without cataplexy. Excessive sleepiness is defined as difficulty maintaining wakefulness and an increased likelihood of falling asleep in inappropriate situations. A diagnosis of narcolepsy should be made according to the International Classification of Sleep Disorders guideline. Such an evaluation usually consists, in addition to the patient's history, sleep measurements testing in a laboratory setting and exclusion of other possible causes of the observed hypersomnia.

2.2. Narcolepsy is a rare (1: 50,000) disorder of sleep. It is neurological disorder marked by uncontrollable attacks of daytime sleepiness and also quite often characterised by cataplexy (sudden loss of muscle power triggered by emotion).

2.3. Modafinil is mentioned in the NICE guidance on symptom management in multiple sclerosis (MS) as an option to be considered if a person with MS wishes to try a medicine for fatigue. They should be referred to a specialist to fully discuss the treatment options. NICE acknowledges this indication is off-label.

2.4. NICE recommends consideration of modafinil to treat excessive daytime sleepiness in people with Parkinson's disease, only if a detailed sleep history has excluded reversible pharmacological and physical causes.

2.5. In November 2010 the EMA's CHMP concluded that the benefits of modafinil continued to outweigh the risks only in the treatment of narcolepsy. The CHMP also concluded that modafinil should no longer be used to treat: Obstructive sleep apnoea; (including in patients with excessive sleepiness despite correctly using a Continuous Positive Airway Pressure machine); Shift work sleep disorder; Idiopathic hypersomnia. Hence any prescribing for these indications should be restricted to hospital only, though primary care need to be aware as possible contraceptive/warfarin interactions etc.

2.6. **Preparations and Dosage**

2.6.1. Modafinil is available as a generic 100mg and 200mg tablet.

2.6.2. Treatment should be initiated by or under the supervision of a physician with appropriate knowledge of the condition being treated.

2.6.3. The recommended starting dose is 200mg a day. It is recommended that patients over 65 years of age commence therapy at 100 mg daily. The total daily dose may be taken as a single dose in the morning or as two doses in the morning and at noon, according to physician assessment of the patient and the patient's response.

2.6.4. Doses of up to 400mg in one or two divided doses can be used in patients with insufficient response to the initial modafinil dose.

2.6.5. In patients with severe hepatic impairment, and severe renal impairment (CrCl <10mL/min), the dose should be halved.

2.7. **Contraindications**

Pregnancy and breast feeding; use in children; uncontrolled moderate to severe hypertension and in patients with cardiac arrhythmias; patients with a history of left ventricular hypertrophy or cor pulmonale; and in patients with mitral valve prolapse who have experienced the mitral valve prolapse syndrome when previously receiving CNS stimulants.

2.8. **Precautions**

Caution is advised as follows:

2.8.1. Modafinil is associated with the onset or worsening of anxiety. Patients with major anxiety should only receive treatment with modafinil in a specialist unit.

2.8.2. Modafinil should be used with caution in patients with a history of:

- Psychosis, depression, or mania
- Abuse of alcohol, drugs, or illicit substances

2.8.3. Such patients should be monitored closely and advised to report any suspected adverse behaviours or thoughts. These patients should be assessed immediately and treatment stopped if appropriate.

2.8.4. Modafinil should be discontinued and not restarted in cases of psychiatric disorders such as suicidal ideation.

2.8.5. Modafinil potentially increases the risk of congenital malformations (including congenital heart defects, hypospadias, and orofacial clefts); modafinil should not be used in pregnancy and alternative treatment options for narcolepsy should be considered.

2.8.6. Women of childbearing potential must use effective contraception during treatment and for 2 months after stopping modafinil.

2.8.7. Since the effectiveness of oral contraceptives may be reduced with modafinil, alternative / concomitant methods of contraception are recommended (and for 2 months after discontinuation of modafinil). The Faculty of Sexual and Reproductive Healthcare Clinical Effectiveness Unit (May 2022), recommends for enzyme-inducing medicines such as modafinil, avoiding combined hormonal contraception (CHC) pills, rings, and patches; progestogen-only pill; progestogen-only implants; and ulipristal acetate emergency contraception.

2.8.8. The guidance states that suitable long-term methods are copper intrauterine device (copper IUD), levonorgestrel-releasing intrauterine system (LNG-IUS), and depot progestogen-only injections.

2.8.9. Whilst studies with modafinil have demonstrated a low potential for dependence, the possibility of dependence with long-term use cannot be entirely excluded.

2.8.10. Serious rash, including Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis and Drug Rash with Eosinophilia and Systemic Symptoms: Serious skin rashes requiring hospitalization and discontinuation of treatment have been reported in adults and children in association with the use of modafinil occurring within 1 to 5 weeks after treatment initiation [isolated cases have been reported after prolonged treatment (e.g. 3 months)]. Modafinil should be discontinued at the first sign of rash and not restarted unless the rash is clearly not drug – related.

2.9. **Initiation and Monitoring**

2.9.1. A baseline electrocardiogram should be done before treatment initiation. Patients with abnormal findings should receive further specialist evaluation and treatment before modafinil treatment is considered.

2.9.2. Cardiovascular function—especially blood pressure and heart rate—should be monitored after one to two months of treatment, and then regularly annually, or more frequently if there are significant risk factors. Modafinil should be discontinued in patients who develop arrhythmia or moderate to severe hypertension, and should not be restarted until the condition has been adequately evaluated and treated.

## 2.10. Side Effects

Below are some of the more common side effects. Please note that this list is NOT exhaustive and that it is recommended that the SPC and BNF should be consulted for a more comprehensive list: decreased appetite, nervousness, insomnia, anxiety, depression, abnormal thinking, confusion, headache, dizziness, somnolence, paraesthesia, blurred vision, tachycardia, palpitation, vasodilatation, abdominal pain, nausea, dry mouth, diarrhoea, dyspepsia, constipation, asthenia. Patients with excessive sleepiness, including those taking modafinil should be frequently reassessed for their degree of sleepiness and, if appropriate, advised to avoid driving or any other potentially dangerous activity.

## 2.11. Common / Significant Drug Interactions

2.11.1. Modafinil is a hepatic enzyme inducer and has the potential to increase

2.11.2. hepatic metabolism of a number of drugs. The SPC and BNF should be consulted for a more comprehensive list of potential drug interactions.

2.11.3. Modafinil accelerates the metabolism of oral contraceptives leading to reduced contraceptive effectiveness hence alternative or concomitant methods of contraception are recommended. Adequate contraception will require continuation of these methods for two months after stopping Modafinil

2.11.4. In view of the enzyme inducing potential of modafinil, care should be taken when co-administering with anti-convulsants.

2.11.5. Metabolism of some tricyclic antidepressants (amitriptyline, clomipramine, imipramine and SSRIs (citalopram) may be inhibited by modafinil and lower doses of these antidepressants may be required.

2.11.6. The clearance of warfarin may be decreased – prothombin times should be monitored regularly during the first two months and after changes in modafinil dosage.

2.11.7. Blood levels of ciclosporin may be reduced.

## 2.12. Areas of Responsibility for the Sharing of Care

2.12.1. These are suggested ways in which the responsibilities for the management of adult patients prescribed modafinil can be shared between the specialist and the general practitioners. The expectation is that these guidelines should provide sufficient information to enable GPs to be confident to take clinical and legal responsibility for prescribing these drugs. 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 should be explained to the patient and be accepted by them.

2.12.2. **In the NHSE guidelines on responsibility for prescribing (January 2018) between hospitals and GPs, it is advised that legal responsibility for prescribing lies with the doctor who signs the prescription.**

2.12.3. **Specialist:**

- To assess the patient and establish/confirm the indication for treatment, ensuring the suitability of the patient for modafinil.
- To undertake or arrange a baseline electrocardiogram before treatment initiation. Patients with abnormal findings should be further evaluated by specialists before modafinil treatment can be initiated.
- To discuss the aims, benefits and side effects of treatment with the patient as well as their role (particularly skin reactions and psychiatric symptoms), including the need for a contraceptive programme for sexually active women of child-bearing potential, before taking modafinil.
- Prescribe modafinil until GP formally agrees to shared care using the suggested wording template (Appendix 3), then transfer prescribing ensuring patient has 4 weeks supply.
- Review of treatment to assess continuing benefit e.g. an annual review by a secondary care specialist, after GP has taken over the prescribing.
- Stop treatment at any appropriate time.
- Ensure clear arrangements for back-up advice and support.
- Reporting adverse events to the MHRA.

2.12.4. **General Practitioner:**

- To respond to the shared care request from the consultant in writing without undue delay.
- Prescribing following stabilisation of dose and patient.
- Blood pressure and heart rate should be monitored after one to two months of treatment, and then regularly annually, or more frequently if there are significant risk factors. Modafinil should be discontinued in patients who develop arrhythmia or moderate to severe hypertension and not restarted until the condition has been adequately evaluated and treated.
- Consider discontinuing if psychiatric symptoms develop in association with modafinil treatment and not restarting OR consider discussing with relevant specialist team / Psychiatry.
- Discontinue at the first sign of serious drug related rash and not restart.

- Monitoring adverse effects and potential drug interactions and reporting to specialist as appropriate.
- Reporting adverse events to MHRA.
- Stopping treatment in the case of a severe adverse event or as per shared care guideline.

2.12.5. **Patient: and parent / carer responsibilities**

- Patients should be advised that modafinil is not a replacement for sleep and good sleep hygiene should be maintained.
- Report any adverse effects to their GP and/or specialist whilst being treated with modafinil.

**BACK-UP ADVICE AND SUPPORT IS AVAILABLE FROM THE RELEVANT CLINICAL TEAM**

# 3. Monitoring compliance and effectiveness

| Information Category | Detail of process and methodology for monitoring compliance |
|---|---|
| **Element to be monitored** | Compliance with prescribing and administration in accordance with this guideline (or other safe practice) |
| **Lead** | Head of Prescribing Support Unit |
| **Tool** | Audit and review tool using patient documentation. |
| **Frequency** | As required according to clinical incident reports |
| **Reporting arrangements** | Via Cornwall Area Prescribing Committee / Medication Practice Committee |
| **Acting on recommendations and Lead(s)** | Relevant Clinical Staff |
| **Change in practice and lessons to be shared** | Lessons and changes in practice will be communicated through various channels to relevant staff |

# 4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

# Appendix 1. Governance Information

| Information Category | Detailed Information |
|---|---|
| **Document Title:** | Modafinil Shared Care Guideline V4.0 |
| **This document replaces (exact title of previous version):** | Shared Care Guideline for Modafinil V3.1 |
| **Date Issued/Approved:** | November 2023 |
| **Date Valid From:** | November 2023 |
| **Date Valid To:** | November 2026 |
| **Directorate / Department responsible (author/owner):** | Neurology Team / Pharmacy - Head of Prescribing Support Unit |
| **Contact details:** | 01872 253548 |
| **Brief summary of contents:** | Some clinical issues and details of prescribing responsibilities for GP and specialists |
| **Suggested Keywords:** | Modafinil, Pharmacy, Shared Care |
| **Target Audience:** | **RCHT:** Yes<br>**CFT:** No<br>**CIOS ICB:** No |
| **Executive Director responsible for Policy:** | Chief Medical Officer |
| **Approval route for consultation and ratification:** | Chief Medical Officer |
| **Manager confirming approval processes:** | Cornwall Area Prescribing Committee |
| **Name of Governance Lead confirming consultation and ratification:** | Richard Andrezjuk |
| **Links to key external standards:** | Kevin Wright |
| **Related Documents:** | Multiple sclerosis in adults: management. NICE NG220 June 2022.<br>Parkinson's disease in adults. NICE NG71 July 2017.<br>Drug Safety Update August 2010, December 2014, November 2020. |

| Information Category | Detailed Information |
|---|---|
| **Training Need Identified?** | None required. |
| **Publication Location (refer to Policy on Policies – Approvals and Ratification):** | Internet and Intranet |
| **Document Library Folder/Sub Folder:** | Clinical / Pharmacy |

**Version Control Table**

| Date | Version Number | Summary of Changes | Changes Made by |
|---|---|---|---|
| Not known. | V1.0 | Initial version | Mike Wilcock, Head of Prescribing Support Unit |
| September 2014 | V2.0 | Updated to comply with latest RCHT format | Mike Wilcock, Head of Prescribing Support Unit |
| September 2017 | V2.1 | Slight text alteration | Mike Wilcock, Head of Prescribing Support Unit |
| November 2020 | V3.0 | To comply with latest format and removal of indications other than narcolepsy, and other minor amendments | Mike Wilcock, Head of Prescribing Support Unit |
| September 2021 | V3.1 | Replacement of Shared Care Agreement Letter with suggested wording template instead (Appendix 3) | Mike Wilcock, Head of Prescribing Support Unit |
| November 2023 | V4.0 | Main amendments to text 2.3, 2.4, 2.6.6, and 2.10.3 | Mike Wilcock, Head of Prescribing Support Unit |

**All or part of this document can be released under the Freedom of Information Act 2000.**

**All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.**

**This document is only valid on the day of printing.**

**Controlled Document.**

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

# Appendix 2. Equality Impact Assessment

## Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

| Information Category | Detailed Information |
|---|---|
| **Name of the strategy / policy / proposal / service function to be assessed:** | Modafinil Shared Care Guideline V4.0 |
| **Directorate and service area:** | Pharmacy |
| **Is this a new or existing Policy?** | Existing |
| **Name of individual completing EIA** (Should be completed by an individual with a good understanding of the Service/Policy): | Dan Thomas, Pharmaceutical Services Contracting Team, NHS Kernow |
| **Contact details:** | 01872 253548 |

| Information Category | Detailed Information |
|---|---|
| **1. Policy Aim - Who is the Policy aimed at?** (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed) | To provide information on prescribing of modafinil to enable General Practitioners to take over prescribing responsibility from secondary care. |
| **2. Policy Objectives** | To promote a consistent level of shared care between primary and secondary care (in relation to RCHT catchment area). |
| **3. Policy Intended Outcomes** | Confident and competent prescribers, enabling medicines to be access in a primary care setting. |
| **4. How will you measure each outcome?** | Six monthly review. |
| **5. Who is intended to benefit from the policy?** | General practitioners, hospital specialists and community pharmacists – from understanding local guidance around use of these medicines. Patients/carers, from being able to access medicines from their GP. |

| Information Category | Detailed Information |
|---|---|
| **6a. Who did you consult with?**<br>(Please select Yes or No for each category) | • Workforce: Yes<br>• Patients/ visitors: No<br>• Local groups/ system partners: No<br>• External organisations: No<br>• Other: No |
| **6b. Please list the individuals/groups who have been consulted about this policy.** | **Please record specific names of individuals/ groups:**<br>Cornwall Area Prescribing Committee. |
| **6c. What was the outcome of the consultation?** | Agreed. |
| **6d. Have you used any of the following to assist your assessment?** | **National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys:**<br>No. |

**7. The Impact**

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

| Protected Characteristic | (Yes or No) | Rationale |
|---|---|---|
| **Age** | No | |
| **Sex** (male or female) | No | |
| **Gender reassignment** (Transgender, non-binary, gender fluid etc.) | No | |
| **Race** | No | |
| **Disability** (e.g. physical or cognitive impairment, mental health, long term conditions etc.) | No | |
| **Religion or belief** | No | |
| **Marriage and civil partnership** | No | |

| Protected Characteristic | (Yes or No) | Rationale |
|---|---|---|
| **Pregnancy and maternity** | No | |
| **Sexual orientation** (e.g. gay, straight, bisexual, lesbian etc.) | No | |

**A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.**

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Dan Thomas, Pharmaceutical Services Contracting Team, NHS Kernow.

**If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:**
Section 2. Full Equality Analysis

# Appendix 3. Suggested wording for Specialist communication re commencement of shared care

This patient is suitable for treatment with (insert drug name) for the treatment of (insert indication) which has been accepted for Shared Care. I am therefore requesting your agreement to share the care of this patient, as they are now stable on the treatment. Where baseline investigations are set out in the shared care protocol, I have carried these out.

Treatment was started on (insert date started) (insert dose).

If you are in agreement, please undertake monitoring and treatment from (insert date). (please note: date must be at least 1 month from stabilisation of treatment.).

Baseline tests: (insert information).

Next review with this department: (insert date).

You will be sent a written summary within (XX) days. The medical staff of the department are available at all times to give you advice. The patient will not be discharged from out-patient follow-up while taking (insert drug name).

Please could you reply to this request for shared care and initiation of the suggested medication to either accept or decline within 14 days.