White Paper

Integrating Medical Cannabis into NHS Care: A Better Outcome for Government, Society, and Patients

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Executive Summary

Medical cannabis has been legally available in the United Kingdom since 2018; however, access remains largely restricted to private clinics. As a result, thousands of patients face substantial personal costs, inconsistent access, criminalisation, and unequal treatment based on financial means rather than clinical need.

This paper argues that expanding National Health Service (NHS) provision of CBPMs would deliver significant benefits for patients, society, and government. An NHS-led approach would improve health equity, reduce long-term healthcare costs, support evidence-based prescribing, decrease reliance on opioids and other pharmaceuticals, and generate broader economic and social benefits.

By moving CBPMs from a predominantly private healthcare model to a regulated NHS framework, the government can improve patient outcomes while creating a more efficient and equitable healthcare system as well as economic benefits for the country.

The Current Situation

In November 2018, specialist doctors in the UK were permitted to prescribe cannabis-based medicinal products (CBMPs). Despite this legal change, NHS prescribing remains extremely limited, with only five prescriptions in total. Most patients who qualify for medical cannabis obtain treatment through private clinics at costs ranging from £1,500 to £3,000 or more annually.

This creates several challenges:

* Access is determined largely by a patient's ability to pay.
* Many patients continue to rely on ineffective conventional treatments.
* Tens of thousands of individuals turn to illicit cannabis markets.
* NHS clinicians gain limited experience with prescribing and monitoring outcomes.
* Data collection and research opportunities remain fragmented.

The result is a two-tier healthcare system that conflicts with the NHS principle of providing care based on clinical need rather than financial means.

A. Benefits for Patients

1. Improved Access and Health Equity

Patients suffering from chronic pain, multiple sclerosis, treatment-resistant epilepsy, anxiety disorders, post-traumatic stress disorder, and chemotherapy-related symptoms may benefit from medical cannabis where conventional treatments have failed.

NHS provision would ensure:

* Equal access regardless of income.
* Reduced geographical disparities.
* Improved continuity of care.
* Better integration with existing NHS treatment pathways.

Healthcare should not depend on an individual's financial resources. NHS access would align medical cannabis with other evidence-based therapies available through public healthcare.

2. Reduced Financial Burden

Many patients currently spend thousands of pounds annually on consultations, prescriptions, and medication through private providers.

For individuals with long-term conditions, these costs can lead to:

* Financial hardship.
* Treatment discontinuation.
* Reduced adherence to prescribed therapies.

NHS funding would remove these barriers and improve long-term treatment compliance.

The Real Cost of Limited Access: Lives are lost!

The recent Coroner's Report into the tragic death of Oliver Robinson generated significant media attention, particularly in relation to the finding that his medical cannabis prescription was a contributing factor. However, his family highlighted a specific detail about the medical cannabis prescription: its cost. Mr. Robinson was unable to afford his prescribed medical cannabis through legitimate pharmacy channels and subsequently turned to the illicit market. This distinction is crucial.

The concern identified was not the regulated, clinically supervised prescription itself, but the financial barriers that prevented continued access to treatment. When patients cannot afford legally prescribed medication, they may seek unregulated alternatives beyond the oversight of healthcare professionals, where product quality, potency, and safety cannot be assured.

This case demonstrates the wider consequences of a system in which access to prescribed medical cannabis depends on a patient's ability to pay. Expanding NHS provision would help keep vulnerable patients within a regulated healthcare framework, ensuring continuity of care, reducing reliance on illicit sources, and improving patient safety.

3. Better Clinical Oversight

An NHS model would provide:

* Standardised prescribing guidelines.
* Integrated patient records.
* Improved monitoring of outcomes.
* Better management of side effects and drug interactions.

Patients would benefit from coordinated care rather than fragmented treatment delivered outside mainstream healthcare systems.

B. Benefits for Society

1. Reducing Health Inequalities

Health inequalities remain a major challenge across the UK. Restricting medical cannabis primarily to private healthcare disproportionately affects lower-income populations, who often experience higher rates of chronic illness.

NHS provision would support:

* Fairer healthcare access.
* Better health outcomes among disadvantaged groups.
* Reduced inequalities in long-term condition management.

2. Reducing Reliance on Illicit Markets

Patients unable to afford private prescriptions may seek cannabis from unregulated sources.

This creates risks including:

* Unknown product quality.
* Incorrect dosage.
* Potential contamination.
* Lack of clinical supervision.

Expanding NHS access would encourage patients to use regulated, pharmaceutical-grade products while reducing demand for illicit supply chains.

3. Supporting Employment and Productivity

Many conditions treated with medical cannabis contribute to:

* Long-term sickness absence.
* Reduced workplace productivity.
* Increased disability-related unemployment.

Improved symptom management can help individuals remain in employment, reducing dependence on welfare support and increasing economic participation.

Even modest improvements in workforce participation could generate significant economic benefits nationally.

C. Benefits for the Government and the NHS

1. Healthcare Cost Savings

While NHS funding would require initial investment, evidence from international jurisdictions suggests savings through reduced utilisation of other healthcare services.

Medical cannabis contributes to reductions in:

* Opioid prescribing.
* Pain management costs.
* Emergency department visits.
* Hospital admissions associated with medication side effects.
* Polypharmacy in patients with multiple chronic conditions.

Reducing reliance on expensive pharmaceutical treatments could offset part of the cost of NHS provision.

2. Improved Data Collection and Research

A national NHS programme would generate high-quality clinical data, enabling:

* Better evidence generation.
* Longitudinal patient monitoring.
* Enhanced pharmacovigilance.
* More informed prescribing decisions.

The UK could become a global leader in medical cannabis research by leveraging NHS infrastructure and population-scale healthcare data.

3. Administrative Efficiency

The current private-clinic model creates duplication of healthcare interactions:

* Patients often continue NHS consultations while paying privately.
* Communication between providers can be inconsistent.
* Treatment decisions are frequently fragmented.

Bringing prescribing into NHS pathways would improve efficiency and reduce administrative burdens across the healthcare system.

International Experience

Countries including Canada, Germany, Australia, and Israel have expanded access to medical cannabis through regulated healthcare systems.

Their experiences demonstrate that:

* Medical cannabis can be safely integrated into mainstream healthcare.
* Appropriate regulation can minimise misuse.
* Data collection can support evidence-based policy development.
* Public healthcare systems can manage prescribing responsibly.

The UK has an opportunity to learn from these established models while designing a framework suited to NHS principles and clinical standards.

Policy Recommendations

To achieve the benefits outlined in this paper, the government should:

1. Expand NHS Prescribing Pathways

Develop national clinical guidelines enabling appropriately trained specialists to prescribe medical cannabis where evidence supports its use. For immediate access, NHS could employ specialists or outsource to existing specialised clinics.

2. Establish a National Patient Registry

Create a centralised database to monitor outcomes, safety, prescribing patterns, and long-term effectiveness.

3. Invest in Clinician Education

Provide NHS clinicians with evidence-based training to improve confidence and consistency in prescribing decisions. End Our Pain has been asking for this since 2018.

4. Support Further Research

Fund large-scale research and observational studies using NHS infrastructure. End Our Pain has been asking for such studies since 2018.

Conclusion

The current private-clinic model for medical cannabis creates inequitable access, limits clinical oversight, and prevents the NHS from fully realising healthcare and economic benefits.

An NHS-based medical cannabis programme would improve patient outcomes, reduce health inequalities, strengthen clinical governance, support research, and lower long-term healthcare costs (see Appendices A and B). It would also align access with the founding principle of the NHS: that healthcare should be based on need, not the ability to pay.

As demand for alternative treatments continues to grow and evidence accumulates, integrating medical cannabis into mainstream NHS care represents a practical, patient-centred, and economically responsible policy choice for the United Kingdom.

Appendix A: Economic Impact Assessment of NHS Medical Cannabis Provision

Introduction

The financial implications of expanding NHS access to medical cannabis should be assessed not solely as an additional healthcare expenditure but as an investment that may generate savings across healthcare, welfare, criminal justice, and wider economic systems.

While further UK-specific research is required, evidence from international healthcare systems and existing UK patient data suggests that NHS provision of medical cannabis could produce substantial long-term economic benefits.

1. Reduction in Pharmaceutical Expenditure

Many patients receiving medical cannabis report reduced use of conventional prescription medications, particularly:

* Opioid painkillers
* Benzodiazepines
* Antidepressants
* Anti-inflammatory medications
* Sleep medications

Illustrative Scenario

If 100,000 eligible NHS patients reduced prescription medication costs by an average of £500 annually, potential savings would equal:

100,000 × £500 = £50 million per year

Additional savings may arise from reduced medication-related adverse events requiring further treatment or hospitalisation.

2. Reduced Costs Associated with Opioid Use

Chronic pain represents one of the largest drivers of NHS prescribing costs and disability-related expenditure.

Long-term opioid use is associated with:

* Increased GP consultations
* Hospital admissions
* Falls and injuries
* Dependency treatment

* Reduced workplace productivity

Medical cannabis may provide an alternative treatment option for selected patients whose pain has not responded adequately to conventional therapies.

Illustrative Scenario

If NHS access reduced opioid prescribing among chronic pain patients by 10–15%, associated reductions in prescribing and treatment costs could produce annual savings running into tens of millions of pounds.

Even a modest reduction in opioid-related healthcare utilisation could offset a significant proportion of medical cannabis programme costs.

3. Reduced GP and Secondary Care Demand

Patients with poorly controlled chronic conditions frequently require repeated interactions with healthcare services.

These include:

* GP appointments
* Pain clinics
* Neurology consultations
* Mental health services
* Emergency care episodes

Improved symptom control may reduce demand across multiple NHS services.

Illustrative Scenario

If 50,000 patients avoided two GP appointments annually at an estimated average cost of £40 per consultation:

50,000 × 2 × £40 = £4 million annual saving

This estimate excludes additional savings from reduced referrals and specialist appointments.

4. Increased Employment and Economic Participation

Many conditions for which medical cannabis is prescribed contribute to reduced workforce participation.

Examples include:

* Chronic pain
* Fibromyalgia

* Multiple sclerosis
* PTSD
* Severe anxiety disorders

Improved symptom management may enable some individuals to:

* Return to work
* Increase working hours
* Reduce sickness absence
* Delay medical retirement

Illustrative Scenario

If 20,000 patients returned to employment or increased their earnings sufficiently to generate an average of £5,000 annually in income tax and National Insurance contributions:

20,000 × £5,000 = £100 million annual fiscal benefit

This figure excludes wider productivity gains to employers and the economy.

5. Reduced Welfare Expenditure

Long-term health conditions are a major driver of welfare spending through:

* Personal Independence Payment (PIP)
* Employment and Support Allowance (ESA)
* Universal Credit health-related elements

While medical cannabis would not eliminate entitlement for many individuals, improved health outcomes could reduce dependency among some claimants and support transitions into employment.

Illustrative Scenario:

If 10,000 patients reduced reliance on disability-related benefits by an average of £3,000 annually:

10,000 × £3,000 = £30 million annual saving

These figures should be regarded as conservative estimates rather than forecasts.

6. Reduction in Illicit Market Activity

Current barriers to legal access encourage some patients to obtain cannabis from illicit sources.

This imposes indirect costs through:

* Criminal justice activity
* Policing resources
* Court administration
* Product safety risks
* Associated healthcare consequences

A regulated NHS framework would increase uptake of legal, quality-controlled products and reduce incentives to access illegal supply chains.

Although difficult to quantify precisely, reductions in enforcement and public health costs would contribute further economic benefits.

7. Research and Life Sciences Growth

The United Kingdom possesses internationally recognised strengths in:

* Pharmaceutical research
* Clinical trials
* Healthcare data analysis
* Life sciences innovation

An expanded NHS medical cannabis programme would create opportunities for:

* Large-scale clinical studies
* International research partnerships
* Job creation in life sciences sectors

The UK could position itself as a European leader in cannabis-based medicines research and development.

8. Economic Growth

The current size of the commercial medical cannabis market in terms of pharmacy sales is expected to reach roughly £345 million in 2026 and almost £1 billion by 2030. This is solely comprised of private clinic patients and corresponds to £2.2 million in pharmacy taxes for 2026.

It is expected that growth of the market will be driven through:
* Increase in domestic production and manufacturing
* Increase in medical cannabis imports (almost doubled from 2024 to 2025 from 15 tonnes to almost 30 tonnes)
* Increase in patient access routes, i.e. telemedicine clinics and NHS access

Consequently, improved NHS access will increase the amount of pharmacy sales and thus taxes.

Estimated Aggregate Economic Impact

The table below illustrates a conservative estimate of potential annual benefits associated with wider NHS access.

Category	Illustrative Minimum Annual Benefit for the state
Reduced conventional medication use	£50 million
Reduced GP consultations	£4 million
Increased tax revenues from employment	£100 million
Reduced welfare expenditure	£30 million
Reduced opioid-related costs	£20–£50 million
Criminal justice and public health benefits	Unquantified
Research and economic growth benefits	Unquantified
Increased tax revenues from the UK cannabis industry	Unquantified

Indicative Total:

****Estimated measurable annual benefit: £204–£234 million****

This estimate excludes wider productivity gains, reduced hospital admissions, criminal justice savings, and life sciences sector growth.

Conclusion

The economic case for NHS medical cannabis provision extends beyond healthcare spending. A carefully regulated programme has the potential to generate substantial savings through reduced pharmaceutical expenditure, lower healthcare utilisation, improved workforce participation, and reduced welfare dependency.

While implementation would require investment and robust clinical governance, the available evidence suggests that the long-term fiscal and societal benefits could outweigh programme costs. For government, NHS leaders, and taxpayers, medical cannabis should therefore be viewed not simply as a treatment expense but as a strategic investment in public health, economic productivity, and social wellbeing.

Appendix B: The Cost of Inaction – The Economic and Social Consequences of Restricting Medical Cannabis to Private Clinics

Executive Summary

Since the legalisation of cannabis-based medicinal products in 2018, access in the United Kingdom has remained overwhelmingly dependent on private healthcare providers. While legal in principle, medical cannabis remains inaccessible in practice for many patients due to the cost of private consultations and prescriptions.

Maintaining the current system imposes significant costs on patients, the NHS, the economy, and wider society. Failure to expand NHS access risks perpetuating health inequalities, increasing demand on healthcare services, reducing workforce participation, and driving patients towards unregulated sources of cannabis.

The question facing policymakers is therefore not whether NHS provision has a cost, but whether the cost of maintaining the status quo is greater.

Costs:

1. Cost to Patients

Private medical cannabis treatment typically costs between £1,500 and £3,000 per year, with some patients paying considerably more depending on their condition and medication requirements.

For many individuals living with chronic illness, disability, or reduced earning capacity, these costs are prohibitive.

As a result:

* Some patients discontinue treatment despite clinical benefit like in the Oliver Robinson case.
* Others accumulate debt to maintain access like our Expert By Experience.
* Many remain untreated despite meeting clinical criteria.
* Access becomes dependent on income rather than medical need.

This creates a two-tier healthcare system inconsistent with NHS principles.

2. Cost to the NHS

Patients who cannot access effective treatment often continue to require repeated NHS interventions, including:

* GP consultations
* Specialist referrals
* Pain management services

* Mental health support
* Emergency care

The absence of NHS medical cannabis provision does not eliminate healthcare costs; rather, it shifts costs elsewhere within the system.

The NHS continues to bear the expense of managing poorly controlled symptoms while lacking access to a potentially effective therapeutic option for selected patients.

3. Cost to the Economy

Chronic pain, neurological conditions, and treatment-resistant mental health disorders are major contributors to:

* Long-term sickness absence
* Reduced productivity
* Economic inactivity
* Early retirement due to ill health

When patients are unable to access treatments that improve functioning and quality of life, the wider economy loses valuable labour, productivity, and tax revenue.

Even small improvements in employment participation among affected populations could generate millions of pounds annually in additional economic activity.

Failure to act therefore represents a continuing loss of productive capacity across the workforce.

4. Cost to the Welfare System

Many patients who may benefit from medical cannabis rely on disability-related benefits because their symptoms restrict employment and daily functioning.

Without access to potentially effective treatment:

* Welfare dependency may increase.
* Return-to-work opportunities may be delayed.
* Government expenditure on disability-related support remains higher than necessary.

The current system therefore sustains avoidable long-term public expenditure.

5. Cost to Society

Limited legal access encourages some patients to obtain cannabis from illicit sources.

This exposes individuals to:

* Unregulated products

* Inconsistent potency
* Product contamination
* Criminalisation risks
* Lack of medical supervision
* Victimisation from criminal suppliers
* Funding organised crime

The social consequences include increased demand on policing, criminal justice resources, and healthcare services responding to harms associated with unregulated products. A regulated NHS pathway would significantly reduce all these risks.

6. The Cost of Delay

Every year that NHS access remains restricted:

* Patients continue to self-fund essential treatment.
* Health inequalities widen.
* Opportunities for cost savings are lost.
* Research and innovation potential remains underdeveloped.
* Economic productivity is unnecessarily constrained.
* The cannabis industry under performs

The cumulative impact of inaction grows over time. Delaying reform does not preserve resources; it merely postpones benefits while allowing avoidable costs to accumulate.

Conclusion

The current private-clinic model places the financial burden of treatment on some of the UK's most vulnerable patients while limiting the potential benefits that medical cannabis could deliver to the NHS, the economy, and society.

Maintaining the status quo carries measurable costs in healthcare expenditure, welfare dependency, lost productivity, and social inequality. Expanding NHS access would not simply represent a new healthcare initiative; it would be an investment in reducing the substantial and continuing costs of inaction.

The policy choice is therefore between paying now to create a regulated, equitable NHS framework or continuing to absorb the growing economic and social costs of a system that leaves many patients without affordable access to legally prescribed treatment.

Appendix C: Call to Action – A Roadmap for Improving Access to Medical Cannabis Through the NHS

Purpose

Medical cannabis has been legal in the United Kingdom since 2018, yet access through the National Health Service remains extremely limited. Thousands of patients who may benefit from treatment are forced to rely on private clinics, creating inequity, financial hardship, and missed opportunities for the NHS and wider society.

The evidence now supports a measured and evidence-based expansion of NHS access. Policymakers have an opportunity to improve patient outcomes, reduce health inequalities, strengthen clinical research, and potentially generate long-term savings across healthcare and welfare systems.

This paper calls upon the Government, NHS England, Parliament, and healthcare regulators to take three practical and achievable steps.

Recommendation 1: Establish a National NHS Medical Cannabis Pilot Programme

A nationally coordinated pilot programme should be launched to evaluate the effectiveness, safety, and economic impact of NHS-prescribed medical cannabis. TRACT is campaigning for that.

Objectives of the programme:

* Provide access to eligible patients with clearly defined conditions.
* Collect standardised clinical outcome data.
* Evaluate healthcare utilisation before and after treatment.
* Assess patient quality of life and employment outcomes.
* Generate robust UK-specific evidence to inform future policy.

A pilot programme would allow policymakers to make future decisions based on real-world NHS data rather than theoretical projections.

Recommendation 2: Commission an Urgent Review of NICE Guidance

Current prescribing limitations are heavily influenced by the interpretation of available evidence and existing guidance.

The Government should request that the National Institute for Health and Care Excellence (NICE) undertake an updated review of cannabis-based medicinal products.

The Review Should Consider

* Evidence published since the 2018 legalisation.
* Real-world patient outcome data from UK private clinics.

* International evidence from countries with established medical cannabis programmes.
* Potential reductions in opioid prescribing.
* Health economic impacts and cost-effectiveness analyses.

Given the rapid growth in international evidence, a refreshed assessment is necessary to ensure policy reflects current knowledge rather than historical assumptions.

Recommendation 3: Establish a Parliamentary Inquiry into NHS Medical Cannabis Access

Parliament should commission a formal inquiry examining barriers to NHS prescribing and identifying opportunities for reform.

The inquiry should hear evidence from:

* Patients and patient advocacy groups.
* NHS clinicians.
* Medical researchers.
* Health economists.
* Private clinic providers.
* NHS commissioners.
* Regulatory bodies.

Key Questions:

* Why has NHS prescribing remained so limited since legalisation?
* What barriers prevent clinicians from prescribing?
* What lessons can be learned from international healthcare systems?
* What are the potential economic implications of wider access?
* How can patient safety and clinical governance be maintained?

A Parliamentary inquiry would provide transparency, accountability, and an evidence-based foundation for future policy decisions.

The Opportunity

The United Kingdom has the expertise, healthcare infrastructure, and research capability required to become a global leader in the responsible use of cannabis-based medicines.

The current system leaves many patients without affordable access while limiting opportunities for clinical learning and innovation.

Reform does not require abandoning caution or compromising patient safety. It requires a commitment to evidence, fairness, and continuous evaluation.

Conclusion

The legalisation of medical cannabis in 2018 was an important first step. However, legalisation without meaningful NHS access has left many patients unable to benefit from the policy change.

The Government now has an opportunity to move beyond a predominantly private model and create a system that reflects the founding principles of the NHS: equitable access, evidence-based treatment, and care based on need rather than ability to pay.

Three actions can begin that process immediately:

1. Launch a national NHS medical cannabis pilot programme.
2. Commission an updated NICE review of cannabis-based medicinal products.
3. Establish a Parliamentary inquiry into NHS access and prescribing barriers.

Together, these measures would provide the evidence, transparency, and leadership necessary to determine the future role of medical cannabis within the NHS and ensure that policy serves patients, healthcare professionals, taxpayers, and society as a whole.

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Clinical Justification for NHS Reimbursement of Cannabis-Based Medicinal Products in the United Kingdom

Upon the invitation of the United Patients Alliance, Bedrocan shares its perspective on NHS reimbursement of medicinal cannabis, drawing on over 20 years of experience as a recognised supplier to the German market. This document proposes a quality framework in which reimbursement eligibility depends on pharmaceutical standardisation, clinical evidence, and safe administration.

2. International Precedent: Germany as a Reference Model

Germany provides the most directly relevant international model for NHS reimbursement of medicinal cannabis. Since 2017, §31(6) of the Social Code Book V (SGB V) has permitted statutory health insurers to reimburse cannabis-based medicinal products under the following conditions:

- Medical necessity is established by the treating physician.
- No comparable therapeutic alternative is available or appropriate.
- There is a reasonable prospect of therapeutic benefit.

This is a patient-level reimbursement determination, not a population-level benefit assessment. Products are not subject to the standard AMNOG* benefit assessment process applicable to finished medicinal products; reimbursement is reviewed case-by-case, with the treating physician's clinical judgement playing a central role. Germany's experience demonstrates that such a framework is both operationally manageable and clinically safe at scale.

3. Clinical Evidence

3.1. Evidence from German clinical practice

Nearly two decades of clinical use in Germany have generated a substantial body of real-world evidence on standardised cannabis flos used within routine care. Key findings reported across observational studies, registry data, and patient-reported outcomes include:

- High patient-reported therapeutic benefit across multiple indications, particularly chronic pain, spasticity, and sleep disturbance. [3]
- A large German survey (Szejko et al., 2024) found that patients receiving standardised cannabis flos reported high rates of subjective benefit, favourable tolerability, and meaningful improvements in pain, spasticity, and sleep. These are findings that align with outcomes observed in controlled clinical studies. [4]

3.2. Systematic review evidence

A comprehensive systematic review (Leen et al., 2024) published in Frontiers in Pharmacology examined the clinical and pharmacological effects of standardised cannabis products across both healthy volunteer and patient studies. Key findings included:

- Standardised cannabis flos products with defined cannabinoid profiles demonstrate reproducible pharmacokinetics and consistent clinical effects across studies.
- Safety profiles are favourable, with no evidence of severe adverse events in appropriately selected patients at therapeutic doses.
- Clinically meaningful symptom relief is documented across multiple indications, including pain, spasticity, and sleep disturbance.

*) German law to regulate pricing and reimbursement of new prescription medicines

The review specifically highlights the importance of product standardisation as a prerequisite for generating reliable clinical evidence reinforcing the case that quality-gated reimbursement and evidence quality are mutually reinforcing. [6]

3.3. Chronic pain and fibromyalgia

Chronic pain represents the most common indication for medicinal cannabis use in both Germany and the UK. The clinical evidence base for inhaled, standardised cannabis flos in this indication includes:

- A controlled clinical study (van Dam et al., 2024) in which vaporised balanced THC:CBD cannabis flos produced analgesic effects equivalent to an opioid comparator in patients with fibromyalgia-related chronic pain, a finding of considerable clinical significance given the opioid-sparing potential. [8]
- A retrospective observational study (Mazza et al., 2021) in fibromyalgia patients demonstrating significant improvements in pain scores, disability indices, and symptom severity, with high treatment continuation rates. [9]

These findings are consistent with the broader literature on cannabinoids in chronic pain, including systematic reviews informing NICE's ongoing evidence review.

3.4. Safety in opioid-treated patients

- A randomised controlled crossover trial (van Dam et al., 2023) demonstrated that inhaled standardised cannabis flos does not impair ventilatory control and does not potentiate opioid-induced respiratory depression in chronic pain patients receiving opioids. This is a critical safety finding for a patient population in which polypharmacy is common and respiratory safety is a primary concern. [7]
- Complementary retrospective cohort data (Nunnari et al., 2022) suggest potential opioid-sparing effects following cannabinoid therapy in chronic pain, without increases in benzodiazepine or antidepressant consumption. [10]

3.5. Clinical non-interchangeability of inhaled and oral cannabinoids

A frequently raised question in NHS policy discussions is whether oral cannabinoid formulations could substitute for inhaled cannabis flos. The clinical evidence clearly indicates they cannot:

- Inhaled administration provides onset of action within minutes; oral formulations have delayed, variable, and less predictable absorption typically 30 minutes to 2 hours.
- Inhaled administration bypasses first-pass hepatic metabolism, providing more reliable systemic exposure.
- Patient-directed titration via inhalation enables dose adjustment not achievable with fixed-dose oral or oromucosal products.
- Patients stabilised on inhaled therapy who are switched to oral formulations frequently experience loss of symptom control, increased side effects, and treatment discontinuation. [5]

Inhaled and oral cannabinoid therapies are therefore distinct clinical modalities serving different therapeutic purposes. NHS reimbursement policy should reflect this distinction.

3.6. Evidence gaps and the case for data generation

NICE and NHS commissioners have historically cited insufficient evidence as a barrier to reimbursement. This concern is legitimate, but the response should be a structured reimbursement framework with mandatory data collection not indefinite exclusion from NHS access.

Germany's experience demonstrates that reimbursement and evidence generation are compatible: the German §31(6) framework has been accompanied by systematic data collection through the BfArM companion survey,

generating a real-world clinical evidence base that continues to inform policy. A comparable NHS framework potentially operating through a registry or monitored access programme would enable systematic UK-specific evidence generation while providing access to suitable patients.

4. Proposed Minimum Criteria for NHS Reimbursement

The UK NHS differs from the German statutory health insurance system in important respects. However, the fundamental policy logic – quality-focused product reimbursement based on the principal of the rational use of medicine – is directly applicable to NHS commissioning. The following minimum criteria are proposed as prerequisites for NHS reimbursement of cannabis-based medicinal products, and specifically inhaled cannabis flos. These criteria are product-agnostic: any product meeting them should be eligible for reimbursement consideration. They define the floor of acceptable quality, not a ceiling.

4.1. Pharmaceutical and regulatory quality

- Compliance with European Pharmacopoeia Monograph 3028 (cannabis flower/flos) and with Ph. Eur. 5.1.4 for medicinal products intended for inhalation.
- Demonstrated batch-to-batch standardisation of cannabinoid content, verified by validated analytical methods.
- End-to-end production under EU-GACP and EU-GMP Part II, not limited to final processing stages.
- Use of a validated microbiological-reduction treatment (e.g., irradiation) to ensure compliance with Ph. Eur. 5.1.4 for products intended for inhalation.
- Multi-year uninterrupted supply from a reliable manufacturing infrastructure.

4.2. Clinical evidence requirements

- Product-specific clinical evidence using the same chemovar (*Cannabis sativa* L. variety) as the marketed product.
- Documented evidence of safety (respiratory, cognitive, and cardiovascular).
- Documented evidence of therapeutic benefit for the proposed indication(s), from controlled studies or high-quality observational data (e.g., pain, fibromyalgia, opioid-sparing effects).
- Inhalation studies conducted using the same or equivalent medical vaporisation device.

4.3. Safe, medically validated administration route

- Administration via EU-MDR Class IIb certified medical vaporisers with substance-specific validated delivery characteristics.
- Evidence of harm reduction through vaporisation versus combustion.
- Device-product combination validated for safe, reproducible inhalation delivery.

4.4. Prescribing and governance framework

- Prescribing restricted to specialist clinicians and co-management by general practitioners.
- Mandatory data collection as a condition of reimbursement, to generate UK real-world in-clinical use evidence.
- Patient registry participation, enabling long-term outcome monitoring and pharmacovigilance.
- Regular evidence reviewed by NICE or equivalent body, with criteria updated as evidence develops.
- Clinical education initiatives to support health professionals in the rational use of cannabis-based medicines.

References and Supporting Sources

[1] All-Party Parliamentary Group for Drug Policy Reform. (2021). Inquiry into the Barriers to Accessing Medical Cannabis. UK Parliament, London.

[2] Cannabis Industry Council / YouGov. (2023). UK Medical Cannabis Patient Survey. Available at: cannabisindustrycouncil.org

[3] Szejko, N., et al. (2024). Patient-Reported Outcomes of Standardised Cannabis flos in Germany. European Journal of Pain.

[4] BfArM. (2022). Cannabis: Begleiterhebung — Companion Survey Results. Federal Institute for Drugs and Medical Devices, Bonn.

[5] Grotenhermen, F. (2003). Pharmacokinetics and Pharmacodynamics of Cannabinoids. Clinical Pharmacokinetics 42(4):327–360.

[6] Leen, N., Kowal, M., Batalla, A., Bossong, M. (2024). The Effects of Standardised Cannabis Products in Healthy Volunteers and Patients: A Systematic Literature Review. Frontiers in Pharmacology 15:1411631.

[7] van Dam, N., Niesters, M., Olofsen, A., Dahan, A. (2023). Inhaled Δ9-Tetrahydrocannabinol Does Not Affect Ventilatory Control and Does Not Potentiate Opioid-Induced Respiratory Depression. British Journal of Anaesthesia 131(2):e1–e9.

[8] van Dam, N.T., et al. (2024). Analgesic Effects of Vaporised Balanced THC:CBD Cannabis Compared with an Opioid in Fibromyalgia-Related Chronic Pain. British Journal of Anaesthesia 132(1).

[9] Mazza, M., et al. (2021). Effectiveness and Safety of Medical Cannabis in Fibromyalgia: A Retrospective Observational Study. Pain Medicine 22(8):1792–1801.

[10] Nunnari, J., et al. (2022). Opioid-Sparing Effects of Medical Cannabis in Chronic Pain: A Retrospective Cohort Study. Journal of Clinical Medicine 11(3):650.

[11] European Medicines Agency. (2024). Annex to the Guideline on Excipients in the Labelling and Package Leaflet of Medicinal Products for Human Use. Amsterdam: EMA.

[12] NICE. (2019). Cannabis-based Medicinal Products (NG144). National Institute for Health and Care Excellence, London.

[13] §31(6) SGB V. Social Code Book V — Statutory Health Insurance. Bundesministerium der Justiz. https://www.gesetze-im-internet.de/sgb_5/__31.html

[14] Cirillo, F., et al. (2025). White Paper on MDR Risk Classification of Vaporisers for Cannabinoid Preparations or Cannabis Flowers. German Pharmaceutical Society (DPhG), Expert Group on Medical Cannabis.

This document is intended for regulatory, policy, and clinical audiences. It does not constitute medical advice and should be read in conjunction with the cited primary literature.