

Briefing for the Citizen Participation and Public Petitions Committee on petition PE1884: [Make whole plant cannabis oil available on the NHS or alternative funding put in place](#), lodged by Steve Gillan.

Brief overview of issues raised by the petition

Introduction

SPICe has published a [briefing](#) for this petition. This briefing provides Members with an overview of some of the current international legislation and policy on the use of cannabis-based products for medicinal use (CBPM) containing THC (tetrahydrocannabinol) to treat epilepsy in children and adults.

[Cannabis has many active chemical constituents](#). The two that have been investigated the most for their medicinal value are THC (tetrahydrocannabinol) and CBD (Cannabidiol).

[The CBPMs which contain THC include:](#)

- Sativex (contains both THC and CBD)
- Nabilone (synthetic cannabinoid similar to THC)
- Dronabinol (synthetic form of THC)

The Chief Pharmaceutical Officer for Scotland's [written submission of 19 August 2021](#) on this petition outlines some of the barriers to prescribing CBPMs in Scotland. The Chief Pharmaceutical Officer for Scotland states that the 'majority of specialist doctors have concerns around the safety and efficacy of CBPMs' and, specifically, the lack of 'robust evidence' regarding their use.

These concerns reflect the findings of a [review](#) by NHS England (August 2019), which suggested that weak clinical evidence has prevented the prescription of CBPMs by clinicians.

Three products have been licensed by the Medicines and Healthcare products Regulatory Agency (MHRA) following the changes to the [Misuse of Drugs legislation](#) in 2018. These are [Epidyolex, Sativex, and Nabilone](#). Epidyolex received marketing authorisation in September 2019.

[However, only Epidyolex is recommended for prescription by the NHS in Scotland.](#)

The Scottish Medicines Consortium (SMC) accept Epidyolex (CBD) for use within NHS Scotland as an add-on therapy with clobazam for seizures associated with [Lennox Gastaut syndrome](#) and [Dravet syndrome](#), both severe forms of epilepsy, in patients aged 2+. Epidyolex is [currently under consideration](#) by the SMC as an add-on therapy for seizures associated with Tuberous Sclerosis Complex in patients aged 2+.

Sativex is [currently not recommended](#) for use in NHS Scotland as an add-on treatment for patients with treatment-resistant moderate to severe spasticity caused by Multiple Sclerosis (MS). The SMC states that this is due to the holder of the NHS marketing authorisation not making a submission to the SMC regarding this product. [Individual doctors may be willing to prescribe Sativex without SMC recommendation. Sativex can also be accessed on a private prescription.](#)

All cannabis-related products for medicinal use that do not have market authorisation (i.e. those other than Sativex, Nabilone, and Epidyolex) are unlicensed medicines. Unlicensed medicines can be legally prescribed in some cases if there is a special clinical need. However, unlicensed medicines create further concerns for clinicians due to the responsibility of care that prescribing clinicians have.

Medicines with a market authorisation have been [submitted to and authorised by a regulatory authority](#), which implies that the medicine has went through extensive clinical trials and tested for its safety, efficacy, and side effects. A [briefing paper by the House of Commons Library in May 2020](#) stated that 'almost all' cannabis-

based medicines in the UK prescribed by specialist doctors are unlicensed medicines

Relevant UK Guidance

The National Institute for Health and Care Excellence (NICE) published [guidance](#) on prescribing CBPMs in November 2019. The guidance focused on using CBPMs to treat intractable nausea and vomiting, chronic pain, spasticity, and **severe-treatment resistant epilepsy**.

NICE have released evidence-based recommendations on Epidyolex, which does not contain THC, for seizures associated with [Lennox-Gastaut syndrome](#) and for seizures associated with [Dravet syndrome](#). NICE have [acknowledged](#) that most of the current evidence for severe treatment-resistant epilepsy has evaluated the use of pure CBD products, rather than THC-containing products.

While individual patients have reported having fewer seizures when using unlicensed CBPMs for epilepsy, NICE [states](#) that current evidence for these medicines is 'limited and of low quality'. NICE feels unable to assess how affective these medicines are and therefore recommends further research on:

- The clinical and cost effectiveness of CBD in epileptic disorders in children, young people, and adults.
- The impact of THC in combination with CBD for severe treatment-resistant epilepsy in children, young people, and adults.

NICE released a [clarification of guidance](#) in March 2021. NICE stated that, while there was 'insufficient evidence of safety and effectiveness to support a population-wide practice recommendation' of CBPMs for severe treatment-resistant epilepsy, healthcare professionals are not prevented from considering the use of unlicensed CBPMs where clinically appropriate.

The British Paediatric Neurology Association (BPNA) released [guidance](#) in October 2018 on the use of cannabis-based products for medicinal use in children and young people with epilepsy:

- While the BPNA found ‘good clinical evidence’ that CBD has an anti-epileptic effect in Dravet Syndrome and Lennox-Gastaut Syndrome, two severe epilepsy syndromes, the evidence for THC was mixed.
- The BPNA noted that there was less data on the effectiveness and safety of products containing THC in treating epilepsy in children and young people.
- The BPNA found that one study suggested some effectiveness, but it did not consider this study to be ‘high quality’ evidence.
- The BPNA also had concerns about the possible impact of THC on the development of children and young people.

International Evidence

This briefing provides information on current guidelines from Australia, America, Ireland, and Canada. It is not intended to be a comprehensive review of all research and literature in the area.

Ireland

The Health Products Regulatory Authority (HPRA) is the Irish equivalent of the UK Medicines and Healthcare Regulatory Authority. Under a request by the Minister for Health, [the HPRA reviewed the potential medical uses of cannabis](#). Following the review’s publication in February 2017, a 5-year [Medical Cannabis Access Programme](#) (MCAB) was established.

The MCAB permits patients with three medical conditions, defined in the review, to be treated with cannabis or cannabinoids. One of these conditions is **severe, treatment-resistant epilepsy that has failed to respond to standard anticonvulsant medications whilst under expert medical supervision.**

With regards to the use of THC for severe, treatment-resistant epilepsy, the HPRA found the evidence to be complex. While THC appeared to function as an anti-convulsant in some circumstances, it also appeared as a pro-convulsant in others.

The HPRA’s review covered the **differences between THC and CBD**. A distinction must be made between cannabis products containing THC and those which contain no THC. **The review reported that data is not sufficient for THC-containing**

cannabis products in many cases. The evidence does not currently support their authorisation as medicines.

The HPRA provided an [opening statement](#) to the Oireachtas Joint Committee on Health's evidence session on the Medical Cannabis Access Programme, in September 2021. It acknowledged that the scientific evidence considered by the review was 'extremely limited and fell well short of the standard and level required for a medicine to receive market access.'

America

As of May 2021, [36 American states and 4 territories](#) allow for the medical use of cannabis products. In January 2017, the National Academies of Sciences, Engineering, and Medicine (NASEM) published [The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research](#). NASEM convened a committee of experts to conduct an evidence review of the short and long-term impacts of cannabis and/or its constituents. The committee considered recently published systematic reviews and good-quality primary research.

[**Key conclusions included no or insufficient evidence to support or refute the conclusion that cannabinoids are an effective treatment for epilepsy.**](#)

In their [2018 assessment](#) of NASEM's publication, the Chief Medical Officer for England and the Chief Medical Adviser to the UK Government concluded that 'the review of this committee can be considered the most rigorous and wide ranging to date' on medicinal cannabis.

Australia

The Department of Health of the Australian Government completed a review on medicinal cannabis, published in 2018. The Chief Medical Officer for England and the Chief Medical Adviser to the UK Government also examined this review in their [assessment](#). This said that the review showed limited, but high-quality, evidence for the use of medicinal cannabis products in the treatment of epilepsy.

The Therapeutic Goods Administration (TGA) within the Department of Health released [guidance](#) for the use of medicinal cannabis in Australia (December 2017). The TGA are responsible for regulating therapeutic goods in Australia. The guidance acknowledges that, in many cases, there is 'very limited data' from which to draw specific recommendations for the use of CBPMs.

The TGA also released [specific guidance for the use of medicinal cannabis in the treatment of epilepsy in paediatric and young adult patients.](#)

The TGA's guidance to health professionals is that the use of CBPMs should only be considered in cases where conventional treatments for epilepsy in paediatric and young adult patients have been unsuccessful in managing the patient's symptoms. Medicinal cannabis or cannabinoids should only be prescribed as an **add-on treatment** with existing anti-epileptic drugs.

The guidance states that most published clinical and pre-clinical data on the efficacy of CBPMs in treating epilepsy relates to CBD.

The guidance therefore focused mainly on CBD, but did evaluate the efficacy of some THC treatments:

- There is currently insufficient evidence to show the efficacy of CBD:THC (administered orally as an oil) as a treatment for epilepsy. Under the guidelines, the TGA define 'efficacy as the proportion of patients experiencing a 50% or greater reduction in seizure frequency'.
- There is currently insufficient evidence to suggest that CBD:THC/THCA may achieve complete freedom from seizures for the patient.
- There is currently insufficient evidence to suggest that CBD:THC can improve quality of life outcomes.
- There is currently insufficient evidence to suggest that THC can contribute to overall improvements in the patient's quality of life outcomes.

Canada

The Government of Canada outlines [guidance](#) for health care professionals on the use of cannabis and cannabinoids for medical purposes. The guidance was updated in Spring 2018. The

guidance reviews the current evidence for CBPMs as a treatment for various conditions, including epilepsy.

The guidance states that there is ‘anecdotal evidence’ to suggest the anti-epileptic effect of cannabis (THC- and CBD- predominant strains). **The available evidence from pre-clinical studies suggests that certain cannabinoids (CBD) may have anti-epileptic and anti-convulsive properties. However, THC may have either pro- or anti- epileptic properties.**

Observational studies also suggest an association between CBD and a reduction in seizure frequency, as well as an increase in quality of life, among adolescents with rare and serious forms of drug-resistant epilepsy.

The guidance detailed the current evidence on the potential impact of CBPMs, particularly in THC-predominant cannabis:

- The early on-set use of high-potency, THC-predominant cannabis has been associated with an increased risk of some brain structural changes and cognitive impairment.
- Epidemiological studies suggest an association between THC-predominant cannabis use and the onset of anxiety, depressive, and bipolar disorders and the persistence of symptoms related to PTSD, panic disorder, depressive disorder, and bipolar disorder. This association is higher if the THC-predominant cannabis use is chronic and heavy.
- Epidemiological studies suggest an association between THC-predominant cannabis use and psychosis and schizophrenia. This association is higher if the THC-predominant cannabis use begins at an early age, is chronic, and heavy.

Current trials

- [Project Twenty21](#) aims to create the UK’s largest body of evidence for the effectiveness and tolerability of medicinal cannabis. [Adults with epilepsy](#) who have used at least two licensed medications and found them ineffective at managing their condition are eligible to participate.
- Schneider Children’s Medical Centre of Israel and University Children’s Hospital, Ljubljana University Medical Centre (Slovenia) - [Study of the safety and efficacy of MGCND00EP1](#)

(each ml solution contains 100mg of CBD and 6mg of THC) as an add on treatment in children and adolescents with resistant epilepsies.

- The Hospital for Sick Children, Toronto (Canada) – [Cannabinoid Therapy for Paediatric Epilepsy](#). All participants will receive the study drug ‘Cannabidiol-Rich whole Plant Extract (TIL-TC150)’. The active ingredients in TIL-TC150 are THC and CBD.
- University of British Columbia (Canada), University of Manitoba (Canada), Universite de Montreal (Canada), University of Saskatchewan (Canada) – [Cannabidiol in Children with Refractory Epileptic Encephalopathy](#). Participants will receive CanniMed® 1:20, a CBD:THC 20:1 ratio product.

Key Organisations and relevant links

- Australian Government, Department of Health – [Medicinal cannabis](#)
- [PE1884 – Chief Pharmaceutical Officer submission of 19 August 2021](#)
- [PE 1884 – SPICe Briefing](#)
- Government of Canada, [Information for Health Care Practitioners – Medical Use of Cannabis](#)
- Gov.UK, [Cannabis scheduling review: part 1](#)
- Health Products Regulatory Authority (HPRA), [Medical Cannabis Access Programme](#)
- NASEM, [The Health Effects of Cannabis and Cannabinoids: Committee’s Conclusions](#)
- National Conference of State Legislatures, [State Medical Marijuana Laws](#)
- NICE, [Epilepsy](#)
- [Scottish Medicines Consortium](#)

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The purpose of this briefing is to provide a brief overview of issues raised by the petition. SPICe research specialists are not able to discuss the content of petition briefings with petitioners or other members of the public. However, if you have any comments on any petition briefing you can email us at spice@parliament.scot

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