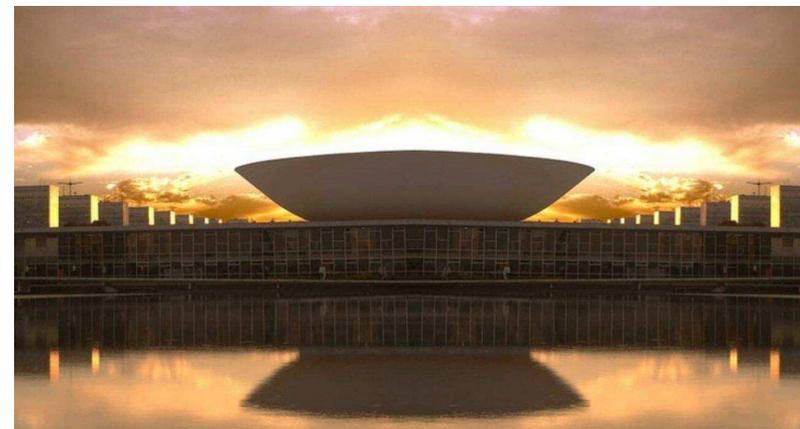




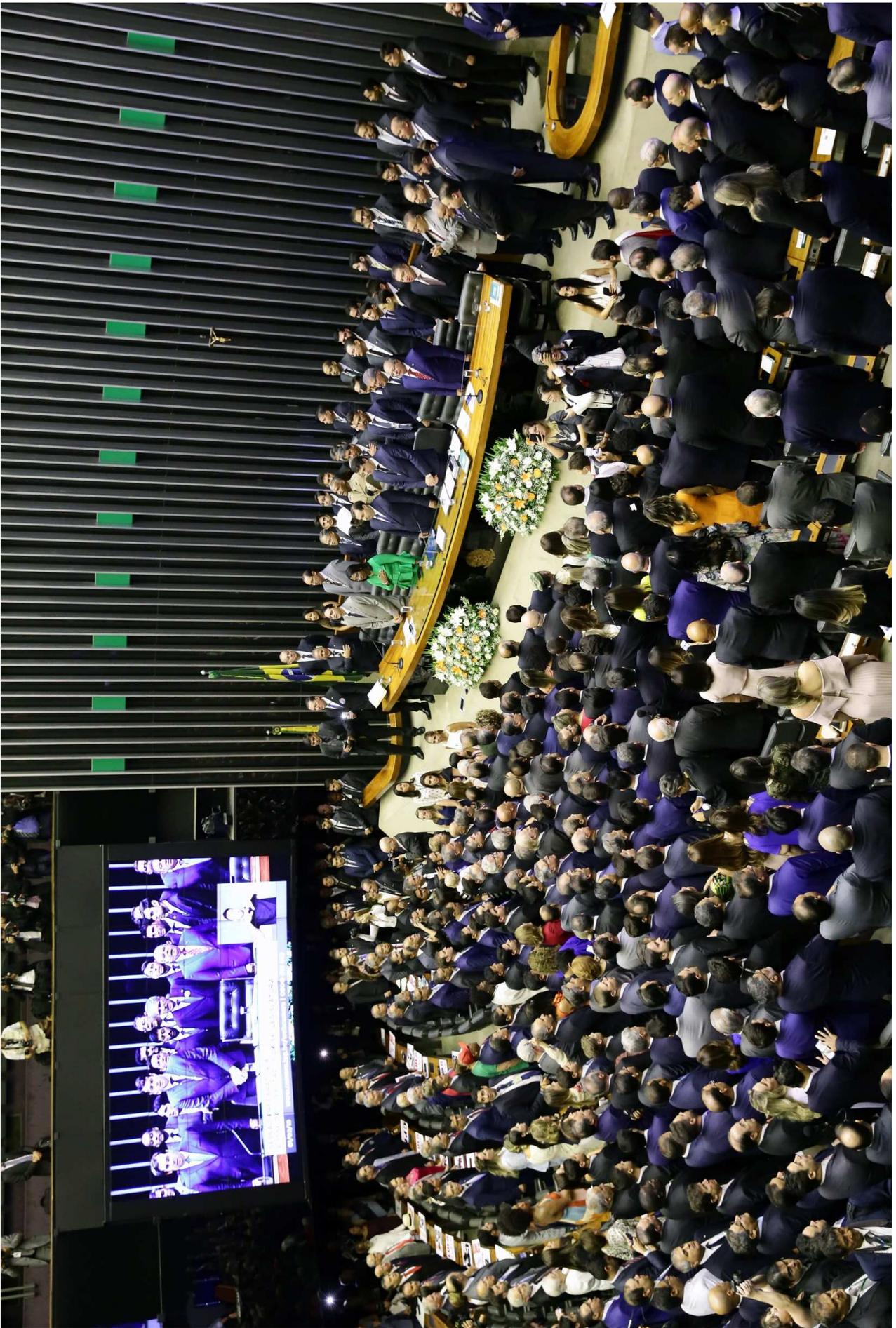
**CFM**  
CONSELHO FEDERAL DE MEDICINA



# **MEDICAMENTOS A BASE DE CANNABIS NA PRÁTICA CLÍNICA**

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## Considerando:

- Na história da Medicina e da Farmácia, **o uso empírico de extratos vegetais no tratamento de inúmeras doenças humanas**, evoluiu para o isolamento e a síntese de princípios ativos terapêuticos, e que estes, submetidos a ensaios clínicos cientificamente controlados, podem expressar o seu perfil de eficácia e tolerância;
- A Cannabis sativa contém, dentre seus inúmeros componentes, o canabidiol (CBD), substância psicoativa que pode ser isolada ou sintetizada por métodos laboratoriais seguros e confiáveis, mas **cujos efeitos ainda não estão bem estabelecidos cientificamente**;
- A Cannabis sativa contém, dentre seus inúmeros componentes, o canabidiol (CBD), substância psicoativa que pode ser isolada ou sintetizada por métodos laboratoriais seguros e confiáveis, mas **cujos efeitos ainda não estão bem estabelecidos cientificamente**;

- Um **reduzido número de estudos** tem demonstrado ação terapêutica do canabidiol em crianças e adolescentes com epilepsia refratária aos tratamentos convencionais, embora, até o momento, sem resultados conclusivos quanto à sua segurança e eficácia sustentada, o que exige a continuidade de estudos;

## **RESOLVE:**

Regulamentar o **uso compassivo do canabidiol** como terapêutica médica, exclusiva para o tratamento de **epilepsias na infância e adolescência refratárias às terapias convencionais**.

# Estudos clínicos

## Fase I

É o primeiro estudo universalmente aceito em seres humanos, embora em pequeno grupo de voluntários sadios.

Objetiva estabelecer uma avaliação preliminar da segurança e do perfil farmacocinético do novo fármaco.

Na Fase I o voluntário é submetido a doses crescentes da droga em teste, de acordo com um cronograma predeterminado.

A fase I também envolve estudos do metabolismo e da biodisponibilidade da droga.

Após estudos em voluntários normais, os ensaios iniciais em pacientes também constituirão parte da fase I.

Tipicamente, estudos de fase I envolvem entre 20-80 participantes de pesquisa.

## Fase II (Estudo Terapêutico Piloto):

Trata-se do estudo realizado com número limitado (pequeno) de pacientes (pessoas afetadas pela doença).

Objetiva demonstrar a atividade farmacodinâmica e estabelecer, a curto prazo, a segurança do princípio ativo e também estabelecer as relações dose-resposta, com o objetivo de obter dados sólidos para consubstanciar os estudos posteriores.

Raramente a fase II é aplicada em mais de 100-200 pacientes por droga.

### Fase III (Estudo Terapêutico Ampliado):

Trata-se de estudo realizado com grandes e variados grupos de pacientes.

Objetiva determinar o risco-benefício a curto e longo prazo das formulações do princípio ativo e seu valor terapêutico relativo, além de explorar o perfil das reações adversas e características especiais: interações farmacológicas e biodisponibilidade.

## **Fase IV (Estudo Pós-Comercialização):**

Trata-se do estudo realizado com base nas características que autorizaram o novo medicamento.

Objetiva fazer uma vigilância pós-comercialização, para estabelecer o valor terapêutico, o surgimento de novas reações adversas, suas freqüências e as estratégias de tratamento.



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## **Problems With the Medicalization of Marijuana**

“Um significativo, mas em grande parte esquecido, problema com o movimento da maconha medicinal é a mensagem que o público assimila de sua legalização e prevalência crescente”.

Samuel T. Wilkinson, MD

Deepak Cyril D'Souza, MBBS,MD

JAMA June 18, 2014 Volume 311, Number 23



## Cannabinoids for the treatment of mental disorders and symptoms of mental disorders: a systematic review and meta-analysis

Nicola Busà\*, Emily Siodanis\*, Gabriela Campbell, Lucy T Tran, Dino Zagajic, Wayne D Hall, Michael Ferrell, Leolise Degemfora†



### Summary

**Background** Medicinal cannabinoids, including medicinal cannabis and pharmaceutical cannabinoids and their synthetic derivatives, such as tetrahydrocannabinol (THC) and cannabidiol (CBD), have been suggested to have a therapeutic role in certain mental disorders. We analysed the available evidence to ascertain the effectiveness and safety of all types of medicinal cannabinoids in treating symptoms of various mental disorders.

**Methods** For this systematic review and meta-analysis we searched MEDLINE, Embase, PsycINFO, the Cochrane Central Register of Controlled Clinical Trials, and the Cochrane Database of Systematic Reviews for studies published between Jan 1, 1980, and April 30, 2018. We also searched for unpublished or ongoing studies on ClinicalTrials.gov, the EU Clinical Trials Register, and the Australian and New Zealand Clinical Trials Registry. We considered all studies examining any type and formulation of a medicinal cannabinoid in adults (≥18 years) for treating depression, anxiety, attention-deficit hyperactivity disorder (ADHD), Tourette syndrome, post-traumatic stress disorder, or psychosis, either as the primary condition or secondary to other medical conditions. We placed no restrictions on language, publication status, or study type (ie, both experimental and observational study designs were included). Primary outcomes were remission from and changes in symptoms of these mental disorders. The safety of medicinal cannabinoids for these mental disorders was also examined. Evidence from randomised controlled trials was synthesised as odds ratios (ORs) for disorder remission, adverse events, and withdrawals and as standardised mean differences (SMDs) for change in symptoms, via random-effects meta-analyses. The quality of the evidence was assessed with the Cochrane risk of bias tool and Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach. This study is registered with PROSPERO (CRD42017059372, CRD42017059373, CRD42017059376, CRD42017064996, and CRD42018102977).

**Findings** 83 eligible studies (40 randomised controlled trials,  $n=3067$ ) were included: 42 for depression (23 randomised controlled trials;  $n=2551$ ), 31 for anxiety (17 randomised controlled trials;  $n=605$ ), eight for Tourette syndrome (two randomised controlled trials;  $n=36$ ), three for ADHD (one randomised controlled trial;  $n=30$ ), 12 for post-traumatic stress disorder (one randomised controlled trial;  $n=10$ ), and 11 for psychosis (six randomised controlled trials;  $n=281$ ). Pharmaceutical THC (with or without CBD) improved anxiety symptoms among individuals with other medical conditions (primarily chronic non-cancer pain and multiple sclerosis; SMD  $-0.25$  [95% CI  $-0.49$  to  $-0.01$ ]; seven studies;  $n=252$ ), although the evidence GRADE was very low. Pharmaceutical THC (with or without CBD) worsened negative symptoms of psychosis in a single study (SMD  $0.36$  [95% CI  $0.10$  to  $0.62$ ];  $n=24$ ). Pharmaceutical THC (with or without CBD) did not significantly affect any other primary outcomes for the mental disorders examined but did increase the number of people who had adverse events (OR  $1.99$  [95% CI  $1.20$  to  $3.29$ ]; ten studies;  $n=1495$ ) and withdrawals due to adverse events (2.78 [1.59 to 4.86]; 11 studies;  $n=1621$ ) compared with placebo across all mental disorders examined. Few randomised controlled trials examined the role of pharmaceutical CBD or medicinal

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## Cannabinoids for the treatment of mental disorders and symptoms of mental disorders: a systematic review and meta-analysis:

Canabinóides medicinais de fundo, incluindo cannabis medicinal e canabinóides farmacêuticos e seus canabinóides medicinais derivados sintéticos, como tetraidrocanabinol (THC) e canabidiol (CBD), têm sido sugeridos para ter um papel terapêutico em certos transtornos mentais. Analisamos as evidências disponíveis para verificar a eficácia e segurança de todos os tipos de canabinóides medicinais no tratamento de sintomas de vários transtornos mentais.



## Cannabis use before age 15 and subsequent executive functioning

Maria Alice Fontes, Karen I. Bolla, Paulo Jannuzzi Cunha, Priscila Previato Almeida, Flávia Jungerman, Ronaldo Ramos Laranjeira, Rodrigo A. Bressan and Acioly L. T. Lacerda

### **Background**

Many studies have suggested that adolescence is a period of particular vulnerability to neurocognitive effects associated with substance misuse. However, few large studies have measured differences in cognitive performance between chronic cannabis users who started in early adolescence (before age 15) with those who started later.

### **Aims**

To examine the executive functioning of individuals who started chronic cannabis use before age 15 compared with those who started chronic cannabis use after 15 and controls.

### **Method**

We evaluated the performance of 104 chronic cannabis users (49 early-onset users and 55 late-onset users) and 44 controls who undertook neuropsychological tasks, with a focus on executive functioning. Comparisons involving

neuropsychological measures were performed using generalised linear model analysis of variance (ANOVA).

### **Results**

The early-onset group showed significantly poorer performance compared with the controls and the late-onset group on tasks assessing sustained attention, impulse control and executive functioning.

### **Conclusions**

Early-onset chronic cannabis users exhibited poorer cognitive performance than controls and late-onset users in executive functioning. Chronic cannabis use, when started before age 15, may have more deleterious effects on neurocognitive functioning.

### **Declaration of interest**

None.

“Usuários crônicos de cannabis de início precoce apresentaram pior desempenho cognitivo do que controles e usuários de início tardio no funcionamento executivo.

Uso crônico de cannabis, quando iniciado antes da idade 15, pode ter efeitos mais deletérios sobre o funcionamento neurocognitivo”.



## Systematic Review of the Costs and Benefits of Prescribed Cannabis-Based Medicines for the Management of Chronic Illness: Lessons from Multiple Sclerosis

Samuel Herzog<sup>1</sup> · Marian Shanahan<sup>2</sup> · Peter Grimison<sup>3</sup> · Anh Tran<sup>1</sup> · Nicole Wong<sup>1</sup> · Nicholas Lintzeris<sup>4,5</sup> · John Simes<sup>1,3</sup> · Martin Stockler<sup>1,3</sup> · Rachael L. Morton<sup>1,6</sup> 

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### Abstract

**Introduction** Cannabis-based medicines (CBMs) may offer relief from symptoms of disease; however, their additional cost needs to be considered alongside their effectiveness. We sought to review the economic costs and benefits of prescribed CBMs in any chronic illness, and the frameworks used for their economic evaluation.

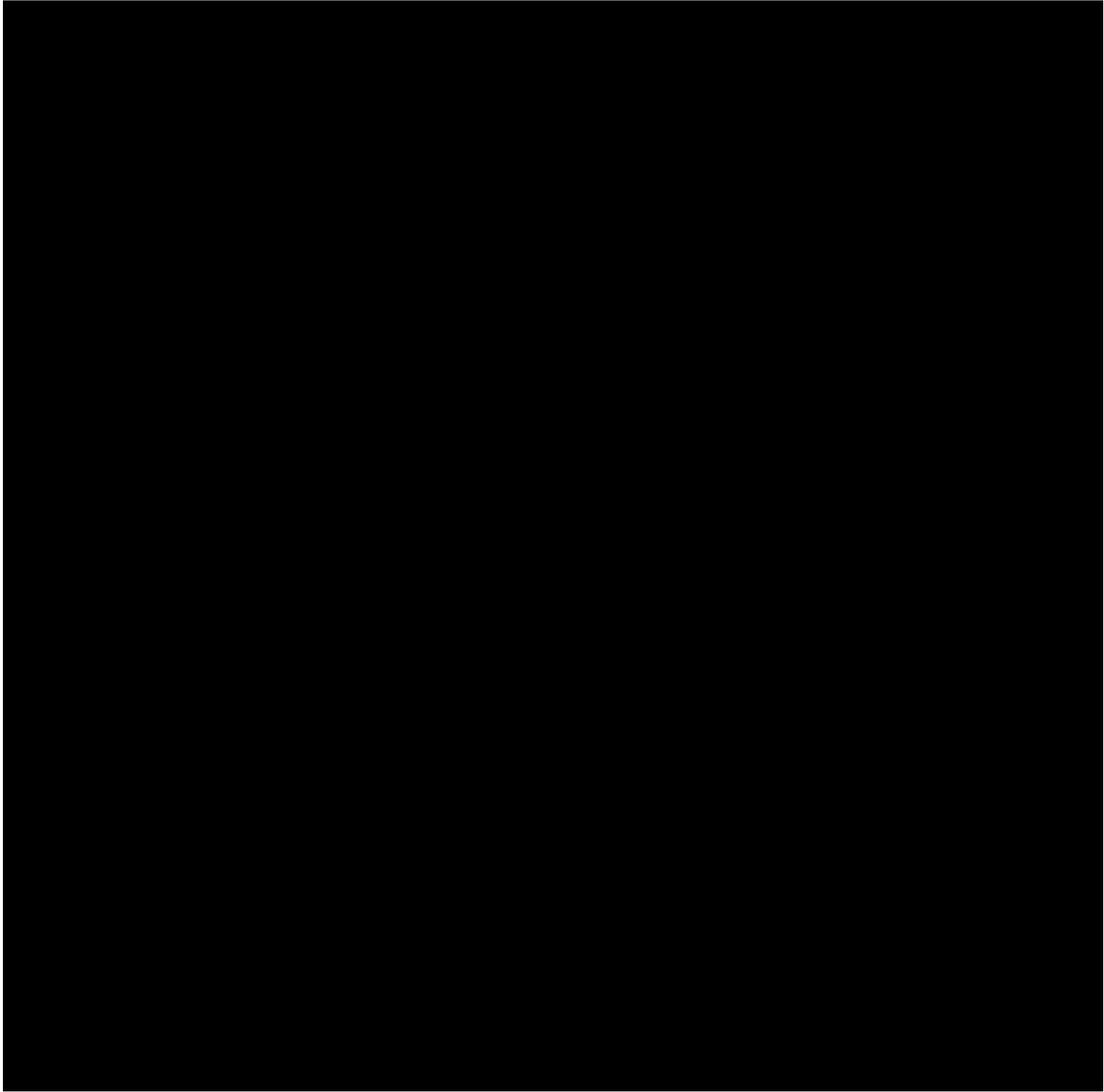
**Methods** A systematic review of eight medical and economic databases, from inception to mid-December 2016, was undertaken. MeSH headings and text words relating to economic costs and benefits, and CBMs were combined.

**Study results** were extracted using relevant checklists and

**Results** Of 2514 identified records, ten studies met the eligibility criteria, all for the management of multiple sclerosis (MS). Six contained economic evaluations, four studies reported utility-based quality of life, and one was a willingness-to-pay study. Four of five industry-sponsored cost-utility analyses for MS spasticity reported nabiximols as being cost-effective from a European health system perspective. Incremental cost-effectiveness ratios per quality-adjusted life-year (QALY) gained for these five studies were £49,257 (UK); £10,891 (Wales); €11,214 (Germany); €4968 (Italy); and dominant (Spain). Nabiximols were cost-effective for the management of MS spasticity from most

A introdução de medicamentos à base de cannabis pode oferecer alívio dos sintomas da doença, no entanto, o seu custo adicional precisa ser considerado ao lado de sua eficácia.

Procuramos rever os custos e benefícios econômicos TCC prescritos em qualquer doença crônica, e as estruturas usado para sua avaliação econômica.





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