

# Living Systematic Review on Cannabis and Other Plant-Based Treatments for Chronic Pain – Quarterly Progress Report/Surveillance Report 1: September 2021

## Summary

The findings reported in the systematic review are current. No new studies meeting the inclusion criteria were identified during the update search of the literature published between July 2021 and mid-August 2021.

## Overview

This is the fourth quarterly progress report for an ongoing living systematic review on Cannabis and other Plant-based Treatments for Chronic Pain. The systematic review, available at <https://effectivehealthcare.ahrq.gov/products/plant-based-chronic-pain-treatment/living-review>, synthesizes evidence on the benefits and harms of plant-based compounds (PBCs), such as cannabinoids and kratom, used to treat chronic pain, addressing concerns about severe adverse effects, abuse, misuse, dependence, and addiction. It includes published studies identified by literature searches through July 2021.

The purpose of this Surveillance Report is to provide an update of the results by including studies in literature searches conducted since then.

## Background and Methods

A comprehensive description of the background, scope, and search strategies are available in the full report.

Four KQs guide the review:

**KQ1:** In adults with chronic pain, what are the benefits of cannabinoids for treatment of chronic pain?

**KQ2:** In adults with chronic pain, what are the harms of cannabinoids for treatment of chronic pain?

**KQ3:** In adults with chronic pain, what are the benefits of kratom or other plant-based substances for treatment of chronic pain?

**KQ4:** In adults with chronic pain, what are the harms of kratom or other plant-based substances for treatment of chronic pain?

The protocol for the systematic review can be found on the AHRQ website (<https://effectivehealthcare.ahrq.gov/topics/nonopioid-chronic-pain/protocol>) and on the PROSPERO systematic reviews registry (registration number CRD42021229579).

In brief, we searched Ovid<sup>®</sup> MEDLINE<sup>®</sup> through August 12, 2021, PsycINFO<sup>®</sup> through the second week of August, 2021, Embase<sup>®</sup> through August 2, 2021, the Cochrane Library through July, 2021, and SCOPUS<sup>®</sup> through August 2, 2021 databases monthly, for studies of patients with chronic pain for at least 4 weeks of treatment or followup. We selected studies of cannabis, kratom, and similar PBCs compared with a placebo, no treatment, each other, or another treatment. Pain is the primary outcome for this review; details on the search strategies are in Appendix A of the full report. The full inclusion and exclusion criteria for all primary and secondary outcomes for this report are in Appendix B of the full report.

## **Results to Date**

### **Results Overview**

The systematic review included evidence from 27 studies (20 randomized controlled trials and 7 observational studies), all assessing cannabis interventions (see the full report for a list of included studies). 2,850 citations were screened for the full review, and studies that were excluded after full-text review along with reasons for exclusion appear in Appendix H of the full review. For this surveillance report, we screened an additional 32 citations and reviewed 3 additional full-text articles. None of the studies met inclusion criteria, and there are no changes to the conclusions in the full systematic review. Studies excluded at full-text review for this surveillance report along with reasons for exclusion are listed in Appendix A.

### **Next Reports**

The next quarterly update report is scheduled to be available in December 2021.

# Authors

Marian S. McDonagh, Pharm.D.  
Jesse Wagner, M.A.  
Azrah Y. Ahmed, B.A.  
Benjamin Morasco, Ph.D.  
Devan Kansagara, M.D., M.C.R.  
Roger Chou, M.D., FACP

# Acknowledgments

The authors gratefully acknowledge the following individuals for their contributions to this project: research associate and librarian Tracy Dana, M.L.S., from Oregon Health & Science University and Task Order Officers Suchitra Iyer, Ph.D. and Meghan Wagner, Pharm.D., M.B.A., at the Agency for Healthcare Research and Quality.

# Disclaimers

This report is based on research conducted by the Pacific Northwest Evidence-based Practice Center under contract to the Agency for Healthcare Research and Quality (AHRQ), Rockville, MD (Contract No. 75Q80120D00006). The findings and conclusions in this document are those of the authors, who are responsible for its contents; the findings and conclusions do not necessarily represent the views of AHRQ. Therefore, no statement in this report should be construed as an official position of AHRQ or of the U.S. Department of Health and Human Services.

None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

The information in this report is intended to help healthcare decision makers—patients and clinicians, health system leaders, and policymakers, among others—make well-informed decisions and thereby improve the quality of health care services. This report is not intended to be a substitute for the application of clinical judgment. Anyone who makes decisions concerning the provision of clinical care should consider this report in the same way as any medical reference and in conjunction with all other pertinent information, i.e., in the context of available resources and circumstances presented by individual patients.

This report is made available to the public under the terms of a licensing agreement between the author and the Agency for Healthcare Research and Quality. This report may be used and reprinted without permission except those copyrighted materials that are clearly noted in the report. Further reproduction of those copyrighted materials is prohibited without the express permission of copyright holders.

AHRQ or U.S. Department of Health and Human Services endorsement of any derivative products that may be developed from this report, such as clinical practice guidelines, other quality enhancement tools, or reimbursement or coverage policies, may not be stated or implied.

AHRQ appreciates appropriate acknowledgment and citation of its work. Suggested language for acknowledgment: This work was based on a quarterly progress report of a living systematic evidence report, Living Systematic Review on Cannabis and Other Plant-Based Treatments for Chronic Pain – Quarterly Progress Report/Surveillance Report 1: September 2021, by the Evidence-based Practice Center Program at the Agency for Healthcare Research and Quality (AHRQ).

**Suggested citation:** McDonagh MS, Wagner J, Ahmed AY, Morasco B, Kansagara D, Chou R. Living Systematic Review on Cannabis and Other Plant-Based Treatments for Chronic Pain – Quarterly Progress Report/Surveillance Report 1: September 2021. (Prepared by the Pacific Northwest Evidence-based Practice Center under Contract No. 75Q80120D00006.) AHRQ Publication No XXX. Rockville, MD: Agency for Healthcare Research and Quality; September 2021. DOI: XXX. Posted final reports are located on the Effective Health Care Program [search page](#).

# Afterword

The Agency for Healthcare Research and Quality (AHRQ), through its Evidence-based Practice Centers (EPCs), sponsors the development of systematic reviews to assist public- and private-sector organizations in their efforts to improve the quality of healthcare in the United States. These reviews provide comprehensive, science-based information on common, costly medical conditions, and new healthcare technologies and strategies.

Systematic reviews are the building blocks underlying evidence-based practice; they focus attention on the strength and limits of evidence from research studies about the effectiveness and safety of a clinical intervention. In the context of developing recommendations for practice, systematic reviews can help clarify whether assertions about the value of the intervention are based on strong evidence from clinical studies. For more information about AHRQ EPC systematic reviews, see <https://effectivehealthcare.ahrq.gov/about/epc/evidence-synthesis>.

These quarterly progress reports will provide up-to-date information about the evidence base to inform health plans, providers, purchasers, government programs, and the healthcare system as a whole on the state of the science. Transparency and stakeholder input are essential to the Effective Health Care Program. Please visit the website ([www.effectivehealthcare.ahrq.gov](http://www.effectivehealthcare.ahrq.gov)) to see draft research questions and reports or to join an email list to learn about new program products and opportunities for input.

If you have comments on this report, they may be sent by mail to the Task Order Officer named below at: Agency for Healthcare Research and Quality, 5600 Fishers Lane, Rockville, MD 20857, or by email to [epc@ahrq.hhs.gov](mailto:epc@ahrq.hhs.gov). They will be considered in the next version of the report.

David Meyers, M.D.  
Acting Director  
Agency for Healthcare Research and Quality

Arlene S. Bierman, M.D., M.S.  
Director  
Center for Evidence and Practice Improvement  
Agency for Healthcare Research and Quality

Craig Umscheid, M.D., M.S.  
Director  
Evidence-based Practice Center Program  
Center for Evidence and Practice Improvement  
Agency for Healthcare Research and Quality

Suchitra Iyer, Ph.D.  
Task Order Officer  
Evidence-based Practice Center Program  
Center for Evidence and Practice Improvement  
Agency for Healthcare Research and Quality