



MJP2 RESEARCH PROGRESS AND CONTEXT REPORT

Regulatory History, Study Design, and Operational Context

MAPS, Study MJP2: Phase 2 Multicenter Study of Inhaled Cannabis for PTSD in Veterans
Michigan Veteran Marijuana Research (VMR) Grant Program | Supplemental Report Q1 2026

EXECUTIVE SUMMARY

MJP2 is a Phase 2 multicenter, randomized, placebo-controlled study examining the safety and efficacy of smoked cannabis for the treatment of PTSD in approximately 320 Veterans. Unlike most clinical trials, **MJP2 was intentionally designed to study cannabis in a randomized controlled trial that models real-world use.** Rather than the tightly controlled pharmaceutical dosing models the FDA typically oversees, MJP2 will use cannabis with the THC potency that patients are actually using today in state medical cannabis programs (rather than the low-potency research cannabis typically available through federal programs), patient self-titrated dosing, and smoked administration. This distinction is central to the study's public health value, and it is also the primary reason the development timeline has differed from more conventional clinical studies.

From 2021 through 2024, **MAPS engaged in an extended and deliberate negotiation with the FDA to secure clearance for a study that preserved this core purpose.** This process included responding to five clinical hold letters (with six complete responses submitted by MAPS), conducting a formal in-person meeting with the FDA, and ultimately filing an escalation to the FDA reviewer's overseeing office. Throughout this process, **MAPS engaged constructively, presenting data to address FDA's concerns and making reasonable accommodations where possible without compromising the elements that define the study's scientific value.** The regulatory precedents established through this process—all publicly documented on the MAPS website—are available to enable future researchers to pursue similar studies without facing the same barriers.

Following the successful dispute and **FDA clearance of the trial for smoking administration with self-titrated 20% THC** in Q4 2024, the study was able to fully engage in operational startup. **As a Sponsor-led, multi-site clinical trial, study startup involves significant sequential and parallel activities across multiple institutions and external vendors** that simply do not exist in a single-site academic study: staffing, competitive CRO selection, site contracting, IRB and DEA approvals at each site, and complex international and interstate drug supply logistics. These activities are now well underway: site contracts are in active negotiation, and study drug logistics are being finalized. The study is progressing toward site activation in Q2–Q3 2026 and, from there, participant enrollment.

1. Study Design and Scientific Rationale

MJP2 was designed to assess the safety and efficacy of inhaled cannabis, as it is currently used by Veterans and millions of other Americans, for the management of PTSD symptoms. In 35+ states where medical or adult-use cannabis is legal, Veterans and other PTSD patients are already using cannabis to manage their symptoms—typically by smoking or vaping high-potency flower that they self-dose based on their individual symptom response. Despite widespread use, there is remarkably little high-quality scientific data on its safety or effectiveness. MJP2 was designed to bridge that gap.

The MJP2 protocol was designed to reflect how medical cannabis is being currently used in real world settings. This means using cannabis with THC potency levels consistent with what patients are actually using today in state-regulated markets (~20%) rather than the 10–12% research-grade cannabis typically available through federal supply programs like NIDA, which does not reflect the products most patients are accessing. It also means allowing participants to self-titrate their dose based on symptom response rather than following a fixed pharmaceutical schedule, and using inhalation via smoking as the administration method (with vaporization to be added pending device documentation) to align with the way cannabis is typically used. This approach is fundamentally different from traditional pharmaceutical clinical trials, which aim to develop a standardized drug product with uniform dosing and tightly controlled administration parameters.

That difference is intentional and important. A trial using NIDA-supplied research cannabis at 10–12% THC would tell us very little about the 20–25% THC products that Veterans are actually using from dispensaries across the country. Studying a standardized, fixed-dose regimen would not account for the individual variability in how patients manage their own symptoms—forcing some participants to consume more than they need and others too little, while failing to inform how dosing actually works in practice when patients titrate to their own symptom response. MAPS is not developing a commercial pharmaceutical product. The goal is to generate safety and efficacy data that reflects the reality of how cannabis is being used, so that patients, Veterans, and their healthcare providers can make genuinely informed decisions.

Preserving this real-world design was therefore central to the study’s scientific integrity and its public health value. However, this non-standard design made the regulatory pathway substantially more complex, as described in the following section.

2. FDA Engagement: A Three-Year, Principled Negotiation

MAPS submitted the initial protocol for MJP2 to the FDA on March 9, 2021. Within weeks, the FDA placed the study on clinical hold — a formal regulatory pause — citing concerns about the proposed dosing and administration approach. What followed was three years of intensive, sustained engagement to secure FDA clearance for the MJP2 study to retain the elements reflecting its intended research question.

What the FDA Objected To

The FDA’s concerns were precisely the design elements that make this study meaningful: the proposed THC potency (designed to reflect what patients are currently using), smoking as a delivery method, vaporization as a delivery method, participant self-titration of dose, and the inclusion of cannabis-naive participants. Over five clinical hold letters spanning 2021 through 2023, the FDA’s position was that these features of the clinical trial presented “unacceptable risks” — despite the fact that millions of Americans were already doing exactly these things outside any research setting.

A sixth clinical hold letter, received in December 2023, continued to reject the study for the same reasons even after MAPS had incorporated extensive safety data and FDA guidance from a formal in-person meeting into our final response. Because the FDA letter did not address the substantive scientific responses MAPS had submitted, MAPS escalated the issue to pursue a formal dispute process with FDA.

The Formal Dispute and What Was Achieved

In August 2024, MAPS submitted a Formal Dispute Resolution Request (FDRR) to escalate the matter above the reviewing Division of Psychiatry Products to the overseeing Office of

Neuroscience. The FDRR argued that the proposed study did not present an unreasonable risk to participants and that the absence of high-quality safety and efficacy data for real-world cannabis use was itself a public health problem that the study was designed to address.

The successful outcome of this dispute, achieved in November 2024 after a multi-year process that included six complete responses to clinical holds, one formal in-person meeting with the FDA, and the formal dispute, **was a meaningful win for the integrity of the study design:**

- Smoking was permitted as a delivery method
- Self-titrated dosing was retained within defined daily maximum limits
- Cannabis potency of ~20% THC was permitted
- A requirement for some prior cannabis inhalation experience was accepted as a reasonable adjustment
- Vaporization remains on partial hold pending device documentation, with FDA no longer objecting to the delivery method in principle

Throughout this process, MAPS engaged constructively with the FDA to provide data and rationale to address the concerns raised by reviewers. During this extended engagement, **MAPS agreed to some compromises that** would not fundamentally compromise the study's core intention, including the exclusion of cannabis-naive participants, a reduction in the original potency proposed, and a reduced and defined maximum daily dose. However, **MAPS held firm when FDA proposed changes would have fundamentally altered the study design and intent.** Accepting the FDA's initial preferences would have required using lower-potency research-grade cannabis, a fixed pharmaceutical dosing schedule, and alternative administration methods — changes that would better answer how a cannabis drug product behaves, not of how real-world cannabis use affects Veterans with PTSD.

Field-Level Impact and Public Transparency

A broader dimension of this regulatory investment is that its benefits extend well beyond MJP2. MAPS has made a deliberate commitment to publicly document all FDA correspondence related to this study on our website at maps.org/marijuana/mjp2. This is not incidental record-keeping — it is a strategic decision to ensure that the regulatory pathways MAPS has negotiated are fully accessible to other researchers pursuing similar work.

By establishing and publicly documenting that the FDA will permit cannabis research that models real-world consumption patterns — including smoking, self-titration, and real-world THC potency — **MAPS has created a resource that meaningfully lowers the barrier for future investigators.** The full record of our negotiations is publicly available, and MAPS is prepared to provide formal letters of reference for other researchers citing this work in their own FDA submissions. This work has cleared a path that others can now follow.

3. Operational Complexity: What It Takes to Run a Multi-Site Sponsored Clinical Trial

The period since FDA clearance in Q4 2024 has been occupied by the operational work of bringing a multi-site, Sponsor-led clinical trial from regulatory approval to active enrollment. This involves a different type and scope of activity than what precedes enrollment in a single-site academic study and understanding that difference provides key context for the current timeline.

Single-Site Academic Studies vs. Sponsor-Led Multi-Site Trials

In a typical single-site academic study, the Principal Investigator holds the research grant, conducts the study at their own institution, and acts as Sponsor-Investigator — bearing direct responsibility for both the scientific and regulatory aspects of the work. Infrastructure, staff, ethics

approvals, and drug supply are all managed within a single institution. When regulatory clearance is obtained, the path to enrollment is relatively direct.

MJP2 operates under an entirely different model. MAPS serves as the Sponsor — responsible to the FDA for the protocol, safety reporting, and oversight of all research activity — while engaging independent Principal Investigators at clinical sites across the country to conduct the actual research. This structure requires a layer of coordination, contracting, and compliance infrastructure that does not exist in a single-site study. Each clinical site is a separate institution with its own leadership, staff, Institutional Review Board (IRB), and federal licensing requirements. Each investigator and site must be individually identified, evaluated, contracted under a clinical trial agreement and associated budget, trained, and activated before a single participant can be enrolled, per the Code of Federal Regulations.

Supporting this structure requires a network of external vendors to perform functions that a Sponsor-Investigator either doesn't require or can address internally at a single site. These include:

- A **Contract Research Organization (CRO)** — Changemark Research + Evaluation — to manage site operations, regulatory monitoring, and compliance across all sites
- A pool of **Independent Raters** to administer PTSD assessments (CAPS-5), to ensure the outcome assessments are not influenced by site staff interaction with participants
- An **Electronic Data Capture (EDC)** system and clinical monitoring infrastructure to ensure consistent, auditable data collection and adverse event reporting across all sites
- A **Medical Monitor** to provide independent safety oversight across the full study
- A **licensed pharmaceutical distributor** to receive, store, and distribute blinded study drug (active and placebo) to sites under DEA Schedule I regulations

Coordinating all of this for a Schedule I substance adds a further layer of regulatory compliance at each site. Beyond IRB approval, each clinical investigator must obtain or update their own Drug Enforcement Administration (DEA) Schedule I researcher registration to include the current study before they can receive or handle study drug. This is an investigator and site-specific federal licensing process that cannot be completed until a site is contracted and ready to proceed.

Study Drug Logistics

The study drug supply chain for MJP2 is particularly complex and warrants specific discussion, as it has no equivalent in conventional clinical research.

Study cannabis must be sourced and produced at consistent quality and sufficient scale to meet Sponsor, FDA, and DEA requirements. This is not achievable through standard federal cannabis supply channels. After an extensive search, only one supplier (based in Canada) was identified as capable and willing to providing cannabis flower at the required potency, quality, and scale under the applicable regulatory framework to meet FDA requirements.

Placebo cannabis — cannabis flower with no THC — but otherwise matching the active product also needed to be sourced and produced at consistent quality to meet Sponsor, FDA, and DEA requirements. The only compliant source identified for this “placebo” material is from the National Institute on Drug Abuse (NIDA). Both the active and placebo study drug must be received by the same vendor to create matched active and placebo pre-rolls and then be packaged and labeled so that neither participants nor site staff can distinguish them. The blinded products must then be transferred to a licensed pharmaceutical distributor for storage and distribution to each of the clinical sites across state lines under separate DEA Schedule I regulations.

This multi-step, multi-vendor supply chain—international procurement, centralized blinding and packaging, and regulated interstate distribution—is substantially more complex than procuring

and storing study drug at a single site. It is a direct consequence of the study’s multi-site design and the requirements of maintaining study integrity through centralized blinding, and it represents a category of operational work that has no parallel in a single-site academic trial.

Startup Milestones and Timeline

MAPS maintained a small core staff during the FDA engagement period as a matter of fiscal responsibility, and delayed operational infrastructure or contracting with external vendors before regulatory clearance was secured to ensure good fiscal stewardship. Once clearance was obtained in Q4 2024, startup activities began in earnest. Many of these activities are interdependent — site contracts cannot be finalized before sites are qualified, and IRB and DEA approvals cannot begin until a site is contracted — though not all follow a strict sequential order.

Startup Activity	Description	Status / Period
Protocol finalization	Updated protocol to remove vaporization and align with FDA-cleared design; ICF amended accordingly	Completed Q1 2025
Core staffing	Onboarded core Sponsor study management staff; external Sponsor oversight contractors for key Sponsor functions	Completed Q1 2025
CRO selection and contracting	Conducted competitive re-bid for CRO Selected Changemark Research + Evaluation	Completed Q2 2025 (selection) Q3 2025 (contract)
Vendor contracting	Independent rater pool (CAPS-5); data management system; medical monitor; active drug supplier (Canada); NIDA placebo supply; drug blinding/packaging vendor; licensed pharmaceutical distributor	Underway; most vendors identified and contracted or in process in parallel with other activities
Site identification, qualification, and contracting	Identifying, evaluating, and contracting clinical sites across the US, with priority on Michigan sites	Active contract negotiations with 7 sites
IRB and DEA approvals at each site	Study-level IRB approval obtained; site-level IRB and DEA Schedule I registration required at each site individually, packet preparation ready as each site finalizes formal contracting	Study-level IRB approved Q4 2025; site level pending contracts
Study drug logistics	International procurement, matched pre-rolls, blinding, packaging, importation, batching, and multi-site distribution of active and placebo cannabis under DEA Schedule I regulations	In process
Site initiation and training	Site initiation visits, staff training, and readiness review at each site prior to enrollment	Pending site contracting

A note on CRO selection: The CRO contract is the single largest operational expenditure in the study, and a decision of this magnitude warranted a careful, deliberative process. Although MAPS had conducted a full RFP and executed a CRO contract during the original grant period, the multi-year gap between the grant award in 2021 and operational startup in 2025 meant that team composition, pricing, and capabilities had changed substantially on all sides. A competitive re-bid process following FDA clearance was the appropriate and fiscally responsible approach. This process resulted in the selection of Changemark Research + Evaluation, a women-owned CRO

with specialized expertise in cannabis and psychedelic research, whose mission alignment with this work is a meaningful operational asset.

4. Site Identification: National Search with a Michigan Priority

In parallel with other startup activities, MAPS has conducted an active and ongoing search for qualified clinical trial sites across the United States. While the proposal committed to a minimum of three U.S. sites, MAPS made a specific commitment to prioritizing Michigan in recognition of the source of the program funding. To date, MAPS has invested more time and resources in Michigan site development than in all other states combined.

Michigan Site Efforts

Despite this prioritization, efforts to establish a Michigan-based site have encountered significant and varied obstacles at every institution engaged to date. These challenges reflect broader structural barriers to conducting cannabis research within academic medical centers and VA facilities — particularly those with federal funding relationships, institutional policies on Schedule I substances, or campus-wide smoking restrictions. The following table documents each engagement.

Institution	Outcome	Reason
University of Michigan, Ann Arbor VA Kettles VAMC	Withdrawn by site	Site withdrew June 2025 citing over-commitment to other research and related understaffing at the VA.
Battle Creek VA	Declined	Declined due to insufficient staffing and a non-operational contracting pathway through the Detroit NPC.
Detroit VA	Declined by leadership	Institutional leadership declined to proceed, citing concerns about conducting research with a federally controlled substance. MAPS offered to provide additional information demonstrating federal compliance, but leadership declined to move forward.
Wayne State University	Declined	Declined due to conflicts of interest with ongoing cannabinoid research at other labs in Detroit.
Michigan State University	Declined	Campus-wide smoking restrictions were cited as a barrier. MAPS provided strategies to address the concern, but the site was unable to proceed. Final decision received January 2026.
Northern Michigan University	Not qualified	Faculty expertise is in analytical and chemical cannabis research; no qualified clinical investigators in PTSD or clinical trials have been identified at this institution.
Lake Superior State University	No response	Multiple outreach attempts have not received a response to date.

MAPS has not given up on securing a Michigan site. Current efforts include engagement with the Veteran Mental Health Leadership Coalition (VMHLC) and Reason for Hope, both veteran health

advocacy organizations focused on alternative treatments for PTSD. Together with these partners, MAPS submitted a joint request on February 3, 2026 for a meeting with Representative Bergman, given his ongoing advocacy for Veterans' access to novel treatments including cannabis and psychedelics through clinical research. We are hopeful this effort may help identify or remove obstacles to a viable Michigan clinical site.

5. Current Status and Next Steps

The study has now moved through its most complex regulatory and early operational phases. The foundational work that could not begin until FDA clearance — protocol finalization, staffing, CRO selection, vendor contracting, and site negotiations — has been completed or is actively underway. The study is in late-stage startup with site activation as the immediate next phase.

Milestones Achieved

- FDA clearance obtained following three-year engagement process (Q4 2024)
- Core Sponsor staff and contracted Sponsor oversight in place (Q1 2025)
- Competitive CRO rebid & Changemark Research + Evaluation contracted (Q3 2025)
- Finalization of key vendor identification and contracting underway (2025–present)
- Active site engagement ongoing nationally, with Michigan as priority
- Active site contract negotiations underway

What Remains and Expected Path to Enrollment

The steps remaining before first participant enrollment are: finalizing site contracts; completing site-level IRB and DEA approvals; completing site initiation visits and staff training; and finalizing study drug supply logistics including blinding and multi-site distribution. Each of these is in active progress, and enrollment is anticipated to begin following completion of site activation.

The regulatory foundation is solid, the CRO and key vendors are in place, and the study design that MAPS committed to preserving — one that reflects how Veterans are actually using cannabis today — remains intact. The time invested in this process reflects the complexity that is inherent in doing this research rigorously and at scale. It is that same rigor that will make the resulting data meaningful to the Veterans, clinicians, and policymakers who need it.