

## VIEWPOINT

## Recommendation for Cannabis Use Disorder Diagnosis in a Context of Cannabis for Therapeutic Purposes

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**Clarification of the *DSM-5-TR***<sup>1</sup> diagnosis of cannabis use disorder (CUD) among individuals using cannabis for therapeutic purposes (CTP) is critical in the context of increasing legalization and use. In a US national survey, 11% of individuals who used CTP met criteria for past-year CUD.<sup>2</sup> Alarming, 17% of new patients starting CTP who had no *DSM-5* diagnosis for CUD at baseline developed CUD within 3 months of initiating cannabis use.<sup>3</sup> These are relatively small proportions of people using CTP who met criteria for CUD, given that the International Narcotics Control Board estimated that almost all individuals who report use of CTP will develop a CUD due to frequent, chronic use.<sup>4</sup> These divergent prevalence estimates reflect a controversy regarding the extent to which *DSM*-based CUD diagnosis<sup>1</sup> accurately captures a problematic pattern of cannabis use when applied to individuals who report CTP.<sup>5</sup>

Individuals who report CTP (some of whom also use cannabis recreationally), compared with exclusively recreational consumers, generally report higher frequency of cannabis use: near daily to daily (eg, 3 to 5 times per week).<sup>5</sup> This higher frequency might be expected when consuming cannabis to address a chronic physical or psychological problem, a pattern of use that can result in neuroadaptation (tolerance, withdrawal) to the effects of cannabis.<sup>5</sup> Importantly, a *DSM-5-TR* CUD diagnosis requires only 2 or more of 11 criteria (Table) and might include only tolerance and withdrawal. *DSM*-defined tolerance, which refers to a significantly decreased effect of the same dose of a substance with regular use or the need for a significant increase in dose to obtain the same effect, is a CUD symptom commonly reported by new patients.<sup>3,5</sup> Further, people who report CTP, rather than for recreational purposes, are more likely to report cannabis withdrawal symptoms.<sup>7</sup> *DSM*-defined tolerance and withdrawal are relatively common symptoms in individuals who report CTP due to expected neuroadaptations in the context of addressing a chronic condition. These 2 criteria alone meet the threshold for a *DSM-5-TR* CUD but may not necessarily represent a problematic pattern of cannabis use. *DSM-5-TR* cautions that when cannabis is consumed in a therapeutic context, tolerance and withdrawal may occur but should not be the primary basis for diagnosing CUD.<sup>1</sup>

Limitations of CUD criteria when applied to people who report CTP,<sup>5</sup> which may include the need for specific training in assessing CUD criteria in the context of CTP, highlight the need for a specific model of CUD in this population. We propose a model of CUD diagnosis in the context of CTP (CUD-CTP; Table) that is based on *DSM-5-TR*'s model of diagnosing substance use disorder in the context of prescribed medication use (eg, opioids, sedatives, stimulants).<sup>1</sup> This prescription medication model

already applies to US Food and Drug Administration-approved cannabinoid medications (eg, dronabinol [Marinol, Syndros]). The proposed model is needed because, as a key difference, CTP is not prescribed but is recommended by registered or certified health care professionals in states where therapeutic use of cannabis is legal. Thus, CTP is not covered by existing *DSM-5* text regarding prescription medication use. *DSM-5*'s prescription medication model specifies that for individuals taking a prescribed medication under medical supervision, tolerance and withdrawal may be expected neuroadaptations resulting from chronic use in the context of a medical dosing regimen.<sup>1</sup> Tolerance can reduce medication efficacy, resulting in escalating doses and/or increasing a drug's potency to obtain a specific effect. While tolerance can lead to increases in dose consumed, withdrawal can maintain heavy use (eg, use to avoid or relieve withdrawal). Although many individuals who report CTP might experience tolerance and withdrawal due to chronic and frequent cannabis use, not all people who report CTP develop a pathological pattern of use.

The proposed CUD-CTP diagnosis addresses a major limitation of existing CUD criteria by explicitly acknowledging expected neuroadaptation in the context of cannabis use to address a chronic physical or psychological problem, similar to the *DSM-5* model used to evaluate prescription medication misuse (Table).<sup>1</sup> Specifically, the CUD-CTP model applies principles already used in *DSM-5-TR* for prescription medications to CTP and assesses pathological cannabis use (eg, impaired control) and cannabis-related impairment (eg, driving while intoxicated) that are not due to expected neuroadaptation from CTP. In addition, similar to *DSM-5-TR*'s prescription medication model, the CUD-CTP model proposes that a combination of dosing regimen (eg, dose, frequency) and patient characteristics (eg, certain mental health conditions) can increase risk for CUD-CTP. However, an important caveat is that although a standard dose for cannabis has been defined (ie, 5 mg), complexities in applying a standardized cannabis quantity unit persist.<sup>8</sup> Further, in contrast to prescribed medications, there is limited or mixed evidence supporting the efficacy of cannabis for certain conditions.<sup>9</sup> There also are no clear guidelines regarding CTP (eg, dosing parameters for specific conditions, requirements for therapeutic monitoring) and regulation of cannabis products.

The proposed CUD-CTP model may be most useful for individuals who only or primarily engage in CTP. Notably, research indicates that people who report only CTP (vs recreationally or both) appear to be at lower risk for CUD.<sup>5</sup> Patients who report only CTP may be more likely to be misdiagnosed as having CUD because they may be

Table. Cannabis Use Disorder (CUD) in the Context of Cannabis for Therapeutic Purposes (CTP)

Modification	DSM-5-TR criterion <sup>1</sup>
Expected neuroadaptation; these 2 criteria alone, in the absence of other criteria, would not qualify for CUD-CTP	Tolerance (indicator of physical dependence) (1) A need for markedly increased amounts of cannabis to achieve intoxication or desired effect. (2) Markedly diminished effect with continued use of the same amount of cannabis. Note: This criterion is not considered to be met for those taking cannabis or cannabinoids solely under appropriate medical supervision. <sup>a</sup>
	Withdrawal (indicator of physical dependence) (1) Withdrawal syndrome for cannabis (2) Cannabis (or a closely related substance) is taken to relieve or avoid withdrawal symptoms. Note: This criterion is not considered to be met for those taking cannabis or cannabinoids solely under appropriate medical supervision. <sup>a</sup>
Other CUD criteria	Use more or longer than intended (eg, use more than recommended)
	Strong desire to quit, difficulties cutting down/quitting
	Much time spent using (eg, much time being "high" or intoxicated)
	Reduce or give up activities to use cannabis
	Use despite negative psychological or physical consequences of use
	Interpersonal problems due to cannabis use
	Impairment in major role: work, school, home
Scoring	Use in hazardous situations (eg, driving while intoxicated from cannabis)
	Strong craving to use cannabis
	2-3 Criteria: mild CUD-CTP (if only 2, cannot be tolerance and withdrawal) 4-5 Criteria: moderate CUD-CTP ≥6 Criteria: severe CUD-CTP

<sup>a</sup> Recommended changes to DSM-5-TR CUD in the context of CTP is indicated.

less likely to experience cannabis-related problems despite frequent cannabis use.<sup>5</sup> The CUD-CTP model is not intended to apply to individuals who primarily engage in recreational use, which may include a combination of recreational and therapeutic use, for which standard CUD criteria apply.

As a proposed modification to DSM-5, the CUD-CTP model requires evidence in support of reliability, validity, and clinical utility in diverse samples as well as consideration of possible deleteri-

ous consequences.<sup>10</sup> Further, other diagnostic criteria and thresholds may be optimal for cannabis used in a therapeutic context. The proposed CUD-CTP model provides a starting point for research to validate the CUD-CTP model. A similar diagnostic model might be considered for psychedelic substances taken in the context of psychedelic-assisted therapies. The CUD-CTP model addresses the critical need to improve diagnostic validity of CUD in the context of CTP.

#### ARTICLE INFORMATION

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