

Limiting the Potency of Delta-9-Tetrahydrocannabinol (THC) in Cannabis Products: What Policymakers Need to Know

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Background ¹⁻⁴

- The potency of cannabis products is based on the percentage of delta-9-tetrahydrocannabinol (THC), the primary psychoactive ingredient of cannabis.
- Marijuana use is now 20% more prevalent among residents of states where it is legal for recreational use than in other states.
- The average potency of cannabis has increased dramatically throughout the last few decades in the United States after legalization.
- The majority of states that have legalized marijuana had THC content that was far above 15%, 19%-21% in some states.

Methods

- PubMed and Web of Science were utilized for a narrative review focusing on THC potency and its adverse effects till January 2023.

Conclusion

- Given the evidence of harmful effects associated with high-potency cannabis, there is a need for reevaluation of cannabis product potency regulation following its legalization in the US.
- States considering future legalization should prioritize understanding the implications of increased consumption of higher potency cannabis

References

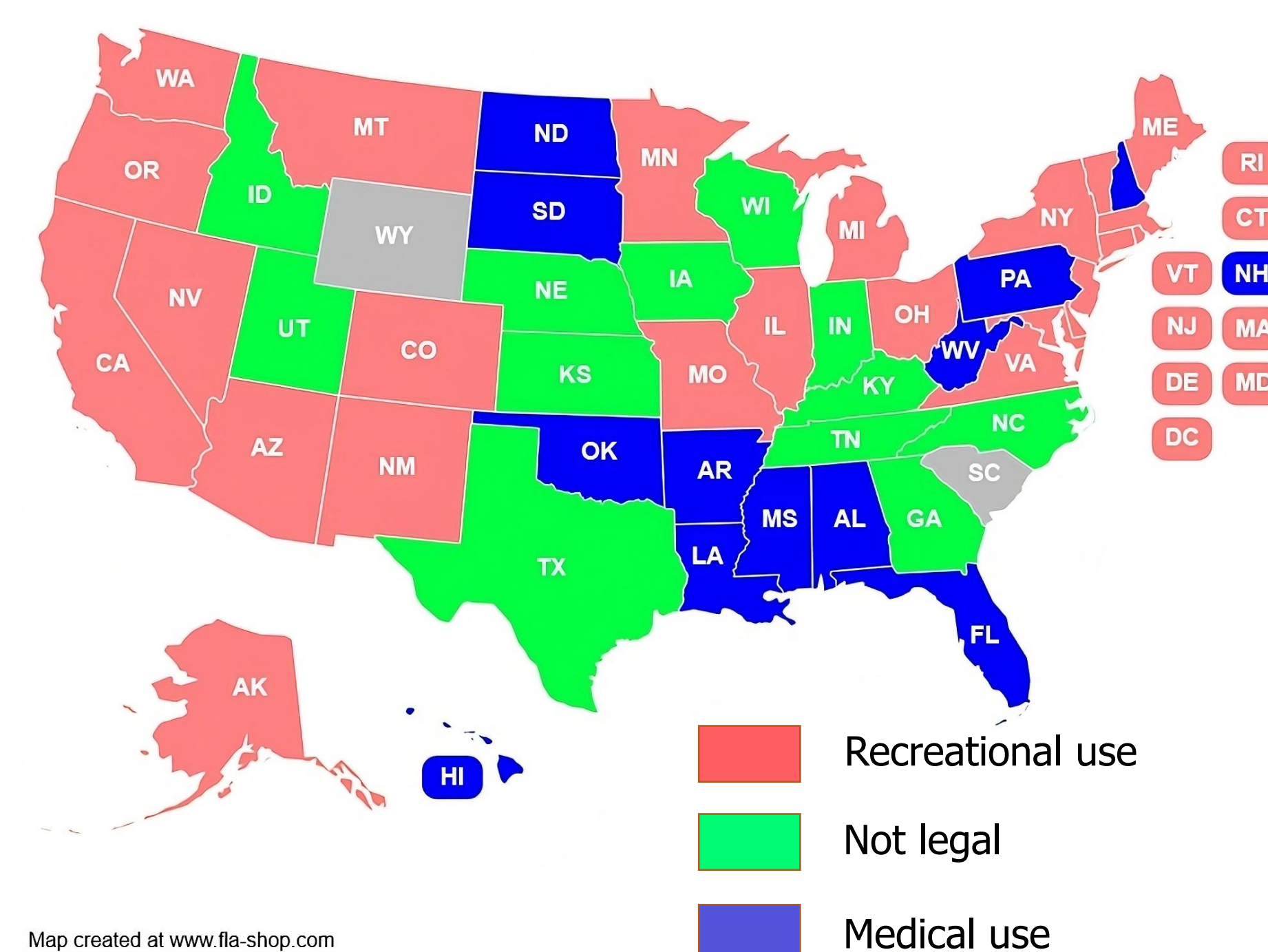
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Objectives

This study examined the impact of elevated levels of tetrahydrocannabinol (THC) in cannabis products on the development of psychosis, cognitive function, driving impairment, hyperemesis, and pregnancy outcomes, due to the growing accessibility and potency of these products following legalization in the United States.

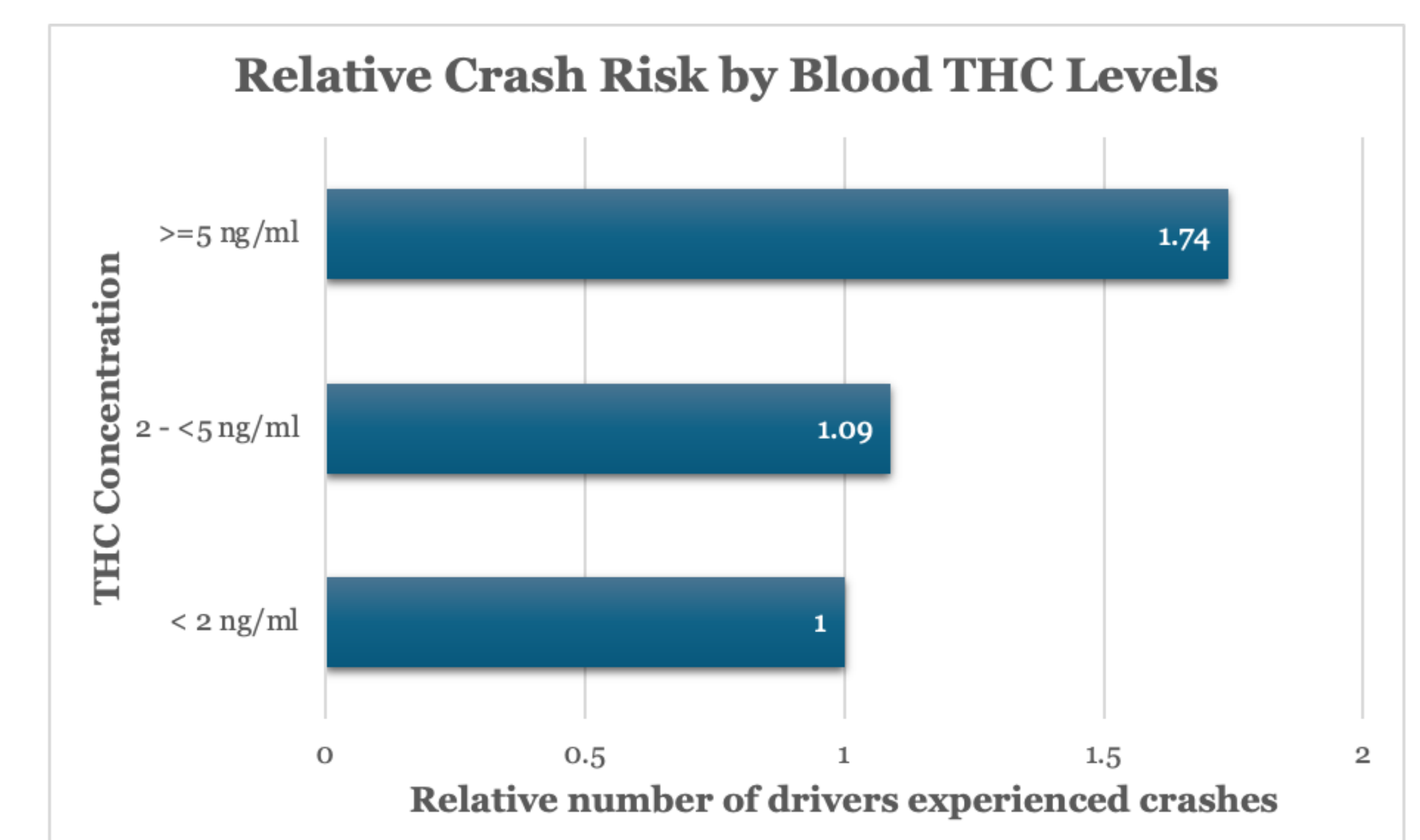
Results

State-wise Marijuana Legalization Status



- Remains illegal at the federal level in the U.S.
- Legal for both recreational and medical use in 24 states and the District of Columbia
- Legal for medical use in 14 states

Impact of THC Concentration on Adverse Traffic Events ⁵⁻⁶



- Higher odds ratio of adverse traffic events associated with blood THC concentrations ≥ 5 ng/ml (OR 4.72, 95% CI 3.04–7.33)
- Zero tolerance for the presence of THC while driving in 12 states: Arizona, Delaware, Georgia, Indiana, Iowa, Michigan, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Utah, and Wisconsin

THC Concentration in Psychotic Disorder ⁷

- Daily, high-potency cannabis use during adolescence is linked to a 6-year earlier onset of psychotic symptoms compared to non-cannabis users
- Daily users of high-potency cannabis are approximately five times more likely to have a psychotic condition than never users.

"Scromiting"- a New Concern ⁸

- A relatively new but serious syndrome "Scromiting"- in frequent high potent cannabis consumption that involves episodes of extreme **vomiting** and **screaming**
- Following legalization, the prevalence of emergency department visits for cyclic vomiting increased substantially, resulting in a prevalence ratio of 1.92 (95% CI 1.33-2.79).

Impact on Special Population ⁹

- Marijuana use during pregnancy and lactation can result in low birth weight, preterm birth, and neurological problems.
- In young adults using cannabis compared with nonusers, the odds ratio of developing depression was 1.37 (95% CI 1.16-1.62) and anxiety was 1.18 (95% CI 0.84-1.67), suicidal ideation was 1.50 (95% CI 1.11 - 2.03) and suicidal attempt was 3.46 (95% CI 1.53 - 7.84).