

List of the Medical Marijuana and Me (M<sup>3</sup>) study measures by design and collection timepoint.

Study measure	Study type and collection timepoint			
	Cohort study			Cross-sectional study
	Baseline	3 months	9 months	
<b>Demographics</b>				
Age in years	X			X
Race/Ethnicity	X			X
Sex at birth	X			X
Gender identity	X			X
Highest level of education	X			X
Employment status	X			X
Veteran status	X			X
Health insurance	X			X
Annual family income in last year	X			X
ZIP code	X			X
<b>General health</b>				
Overall health status (Short Form (SF-8) Health Survey) [8,9]	X	X	X	X
Depression (PHQ-8) [10,11]	X	X	X	X
Anxiety (GAD-7) [12]	X	X	X	X
PTSD (adapted from DSM-5 (PC-PTSD-5)) [13,14]	X	X	X	X
Pain (BPI) [15]	X	X	X	X
Quality of sleep (single item adapted from PSQI) [16]	X	X	X	X
Positive affect (PROMIS) [17,18]	X	X	X	
Anger (PROMIS) [17,18]	X	X	X	

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<b>History of marijuana use (including marijuana obtained without a medical card in Florida)</b>				
Ever used during a lifetime	x			
Age when used for the first time	x			x
Weekly use	x			x
Number of years used weekly	x			x
Daily use	x			x
Number of years used daily	x			x
Marijuana use experience level	x			
Marijuana products ever tried before medical marijuana	x			
Marijuana use in the last six months	x			
Frequency of marijuana use in past 6 months (from CUDIT-R) [19]	x		x	x
Frequency of marijuana use in past 3 months (from CUDIT-R) [19]		x		
Frequency of marijuana use per day in an average use day	x			
Flower use in the past 30 days	x			
Frequency of flower use in the past 30 days	x			
Frequency of flower use per day in an average use day	x			
Ever used CBD	x			
Frequency of CBD use in past 6 months	x			
Amount of money spent on marijuana in a typical month	x			

<b>Alcohol and other substance use</b>				
Alcohol use (AUDIT-C) [20]	x	x	x	x
Cigarette smoking use (from BRFSS) [21]	x	x	x	
E-cigarette/vape use (from BRFSS) [21]	x	x	x	
Frequency of opioid use (with prescription) in past 30 days	x	x	x	
Frequency of opioid use (without prescription) in past 30 days	x	x	x	

Study measure	Study type and collection timepoint			
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	Baseline	3 months	9 months	
Frequency of benzodiazepine use (with prescription) in past 30 days	x	x	x	
Frequency of benzodiazepine use (without prescription) in past 30 days	x	x	x	
Frequency of amphetamine use (with prescription) in past 30 days	x	x	x	
Frequency of amphetamine use (with prescription) in past 30 days	x	x	x	
Frequency of cocaine/crack use in past 30 days	x	x	x	
Frequency of hallucinogens use in past 30 days	x	x	x	
Frequency of synthetic marijuana use in past 30 days	x	x	x	
Frequency of kratom use in past 30 days	x	x	x	
Use of recreational substance to track	x			
Substance name to track (up to 3 substances)	x			
Change in substance tracked		x	x	
Use of (alcohol, cigarettes, vapes, cocaine, hallucinogens, club drugs, synthetic marijuana, and kratom) in past 5 years				x
Change in (alcohol, cigarettes, vapes, cocaine, hallucinogens, club drugs, synthetic marijuana, kratom) since starting medical marijuana				x
Is change in use (alcohol, cigarettes, vapes, cocaine, hallucinogens, club drugs, synthetic marijuana, kratom) related to medical marijuana?				x
Use of (opioids with and without prescription, amphetamines with and without prescription, benzodiazepines with and without prescription) in the past 5 years				x
Change in (opioids with and without prescription, amphetamines with and without prescription, benzodiazepines with and without prescription) since starting medical marijuana				x
Is change in use (opioids with and without prescription, amphetamines with and without prescription, benzodiazepines with and without prescription) related to medical marijuana?				x

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<b>Medications</b>				
List of current medications (medication name, dose, frequency of use, and route of administration)	x	x	x	x
Use of medications to track	x			
Medications names to track (up to 3)	x			
Change in medications tracked		x	x	
Tried to reduce specific medications in past 5 years				x
Name of 3 medications tried to reduce in past 5 years				x
Overall change of medication use since starting medical marijuana				x
Is a change in medication use related to medical marijuana?				x

<b>Medical conditions</b>				
Medical conditions diagnosed by healthcare professional	x			x
Cancer: type of cancer	x			x
Cancer: metastasis	x	x	x	x
Cancer: current cancer status	x	x	x	x
Cancer: current cancer treatment	x	x	x	x
Medical marijuana effect on medical conditions		x	x	x
Method of marijuana use that was most effective for each condition		x	x	x
Name of product that works best for each condition		x	x	x
Other health benefits of medical marijuana		x	x	x
Knowledge of care providers about medical marijuana use		x	x	x
Cancer: knowledge of oncologist/provider about use/ intent to use	x	x	x	x

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<b>Reasons for using or stopping medical marijuana</b>				
Medical conditions that are reasons for medical marijuana use	x			x
Certified medical condition	x			x
Cancer: cancer-specific reason for use	x			x
Marijuana use motive (recreational vs. medical)	x	x	x	x
Reasons for stopping		x	x	
Thinking about stopping use		x	x	
Reasons for thinking about stopping use		x	x	

<b>Expectations</b>				
Expected effectiveness	x			
Concern about addiction/dependence on medical marijuana	x	x	x	x
Likelihood to be taking marijuana in a year	x	x	x	x

<b>Duration of medical marijuana use</b>				
Still using medical marijuana		x	x	
Duration of medical marijuana use		x	x	x
Duration of use before stopping		x	x	
Year first obtained medical marijuana card in Florida				x

<b>Medical marijuana products</b>				
Products tried from the medical marijuana program in Florida (flower, vaporizer cartridges or vape pen (liquid, NOT flower), concentrates (for vaping)		x	x	x

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or smoking), topicals, oral tinctures (with a dropper), oral concentrates, oral capsules or edibles (chews, lozenges, chocolates, or gels), other.				
Products used in the past 30 days (all products)		X	X	X
Reasons for not using the product (all products)		X	X	X
Frequency of product use in past 30 days		X	X	X
Frequency of product use in a typical day (all products)		X	X	X
THC concentration (all products)		X	X	X
Duration to effect onset (all products)		X	X	X
Duration of effects to last (all products)		X	X	X
CBD: THC ratio (all products)		X	X	X
Number of strains tried (all products)		X	X	X
Strain used most (all products)		X	X	X
Duration to consume one flower container		X	X	X
Number of flower containers used per month		X	X	X
Frequency of methods to consume flower in past 30 days (smoking, vaping, cooking)		X	X	X
Number of hits, tokes, or puffs per session when smoking/vaping flower/cartridges/concentrates		X	X	X
Number of seconds when inhaling smoke or vape		X	X	X
Frequency of using concentrate methods in past 30 days (shatter, rosin, wax, keif, crumble, dab tab, hash)		X	X	X
Frequency of using at least 25 mg (rice-sized) of concentrate in past 30 days		X	X	X
Frequency of using topical methods in past 30 days (patch, cream, lotion, balms, salves, spray, transdermal gel, oil)		X	X	X
Milliliters of tincture consumed per occasion		X	X	X
Average milligrams of THC and CBD consumed when using tinctures				
Frequency of using oral concentrate methods in past 30 days (distillate syringe, RSO syringe)		X	X	X
Amount of oral concentrate per occasion		X	X	X

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Frequency of oral methods in past 30 days (capsule/tablets, gel/gummies, brownie/cookie)		x	x	x
Amount spent on products per month in USD		x	x	x
Overall preferred medical marijuana and/or a product type or strain		x	x	x
Preferred method of using medical marijuana		x	x	x
Name of overall preferred strain/product		x	x	x
Amount of used marijuana from a Florida dispensary		x	x	

Side effects				
Symptoms bothered by in the past 2 weeks	x	x	x	x
Were symptoms caused by medical marijuana?		x	x	x
Severe side effects requiring an emergency room visit, seeing a physician, being hospitalized, or feeling extremely sick for a few hours		x	x	x
Describe severe side effects		x	x	x
Frequency of severe side effects		x	x	x
Concurrent use of substance/ medication when severe side effect occurred		x	x	x
Mode of consumption when severe side effect occurred		x	x	x
Cannabis use disorder (CUDIT-R) [19]	x	x	x	x

Beliefs and opinions				
Agree that marijuana products with high THC will be more effective	x	x	x	x
Preference to try low-THC products	x	x	x	x
Importance of CBD in the medical effects of medical marijuana	x	x	x	x
Importance of including terpenes in medical marijuana products	x	x	x	x
Factors influencing products tried		x	x	x
Interest in growing own medical marijuana if it becomes legal in Florida		x	x	x
Additional topics that should be researched	x			x

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Abbreviations: AUDIT-C, Alcohol Use Disorders Identification Test-Concise [20]; BPI, Brief Pain Inventory [15]; BRFSS, Behavioral Risk Factor Surveillance System [21]; CBD, cannabidiol; CUDIT-R, Cannabis Use Disorders Identification Test-Revised [19]; DSM-5 (PC-PTSD-5), Primary Care Post Traumatic Stress Disorder Screen for the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; GAD-7, General Anxiety Disorder-7 [12]; NA, not applicable; PHQ-8, eight-item Patient Health Questionnaire depression scale [10,11]; PTSD, Post Traumatic Stress Disorder [13,14]; PROMIS, Patient-Reported Outcomes Measurement Information System [17,18]; PSQI, Pittsburgh Sleep Quality Index [16]; SF-8, Short Form-8 [8,9]; THC, tetrahydrocannabinol.



## References

1. Yiengprugsawan V, Kelly M, Tawatsupa B. SF-8™ Health Survey. In: Michalos AC, ed. *Encyclopedia of Quality of Life and Well-Being Research*. Springer Netherlands; 2014:5940-5942. doi:10.1007/978-94-007-0753-5\_3664
2. Ware JE, Kosinski M, Dewey JE, et al. How to score and interpret single-item health status measures: a manual for users of the SF-8™ Health Survey. Published online January 1, 2001. Accessed August 2, 2022. <https://www.scinapse.io>
3. Kroenke K, Strine TW, Spitzer RL, Williams JBW, Berry JT, Mokdad AH. The PHQ-8 as a measure of current depression in the general population. *J Affect Disord*. 2009;114(1-3):163-173. doi:10.1016/j.jad.2008.06.026
4. Razykov I, Ziegelstein RC, Whooley MA, Thombs BD. The PHQ-9 versus the PHQ-8 — Is item 9 useful for assessing suicide risk in coronary artery disease patients? Data from the Heart and Soul Study. *J Psychosom Res*. 2012;73(3):163-168. doi:10.1016/j.jpsychores.2012.06.001
5. Spitzer RL, Kroenke K, Williams JBW, Löwe B. A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Arch Intern Med*. 2006;166(10):1092-1097. doi:10.1001/archinte.166.10.1092
6. Bovin MJ, Kimerling R, Weathers FW, et al. Diagnostic Accuracy and Acceptability of the Primary Care Posttraumatic Stress Disorder Screen for the Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition) Among US Veterans. *JAMA Netw Open*. 2021;4(2):e2036733. doi:10.1001/jamanetworkopen.2020.36733
7. Prins A, Bovin MJ, Smolenski DJ, et al. The Primary Care PTSD Screen for DSM-5 (PC-PTSD-5): Development and Evaluation Within a Veteran Primary Care Sample. *J Gen Intern Med*. 2016;31(10):1206-1211. doi:10.1007/s11606-016-3703-5
8. Cleeland, C. S. (1989). *Measurement of Pain by Subjective Report*. In C. R. Chapman & J. D. Loeser (Eds.), *Advances in Pain Research and Therapy: Issues in Pain Measurement (Vol. 12) (Pp. 391-403)*. New York: Raven Press.
9. Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. *Psychiatry Res*. 1989;28(2):193-213. doi:10.1016/0165-1781(89)90047-4
10. Cella D, Riley W, Stone A, et al. The Patient-Reported Outcomes Measurement Information System (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005–2008. *J Clin Epidemiol*. 2010;63(11):1179-1194. doi:10.1016/j.jclinepi.2010.04.011

11. Rothrock NE, Amtmann D, Cook KF. Development and validation of an interpretive guide for PROMIS scores. *J Patient-Rep Outcomes*. 2020;4(1):16. doi:10.1186/s41687-020-0181-7
12. Adamson SJ, Kay-Lambkin FJ, Baker AL, et al. An improved brief measure of cannabis misuse: the Cannabis Use Disorders Identification Test-Revised (CUDIT-R). *Drug Alcohol Depend*. 2010;110(1-2):137-143. doi:10.1016/j.drugalcdep.2010.02.017
13. Bush K, Kivlahan DR, McDonnell MB, Fihn SD, Bradley KA. The AUDIT alcohol consumption questions (AUDIT-C): an effective brief screening test for problem drinking. Ambulatory Care Quality Improvement Project (ACQUIP). Alcohol Use Disorders Identification Test. *Arch Intern Med*. 1998;158(16):1789-1795. doi:10.1001/archinte.158.16.1789
14. CDC - BRFSS - Questionnaires. Published June 8, 2022. Accessed August 2, 2022. <https://www.cdc.gov/brfss/questionnaires/index.htm>