Testimony to the Senate Committee on Federal and State Affairs
Opposition to SB555
March 28, 2024

Chairman Thompson and Committee Members

The Kansas Association of Chiefs of Police (KACP) are opposed to the legalization of medical marijuana. The KACP is opposed to SB555 which describes the proposed Medical Marijuana Cannabis Pilot Program Act.

The KACP has reviewed SB555 and found there are a multitude of serious concerns important to law enforcement. In this testimony we will focus on the recognized regulatory issues in SB555.

Below is a listing of sections of the bill, the page number, the topic, and the description of the area of concern.

Our testimony will start out with Section 8 which describes in some detail about how pharmacies would dispense medical cannabis. By action of the Secretary there could be an extraordinary number of pharmacies dispensing sites in the state. There would be no requirement that any pharmacy be required to dispense cannabis. There is no mention in the Act of regulating pharmacy employees. There is a requirement that all pharmacists, pharmacy technicians, and employees are background checked. The background check is intended to ensure the candidates don't have any criminal histories that would make it difficult for them to practice safely and morally. The checks also ensure that the candidate hasn't been convicted of any offenses connected to the pharmacy profession, such as the illicit sale or distribution of prohibited medications.

In one of the most startling aspects of the proposed bill, in Sec. 8(b) the language about pharmacies turns on a dime. The bill suggests that after passage of the bill, there would be a determination if pharmacies are precluded from operating distribution hubs by federal law or regulations. This is something that should be known before SB555 is even considered. The bill states in Sec.8(b) that if it is determined pharmacies are precluded from operating distribution hubs, the secretary can enter into contracts with medical cannabis operators for the operation of distribution hubs. Essentially, bypassing the pharmacies and turning full control of distribution over to the industry.

So, considering there will be at least as many distribution hubs operated by medical cannabis operators as there were pharmacies that would be distribution hubs, the non-pharmacy distribution hubs would infiltrate neighborhood strip centers across the state, just as dispensaries have done in other surrounding states. Even though a medical cannabis operator shall not operate more than seven distribution hubs, the industry will lobby for changes in the Act to allow for more distribution hubs.

Background checks are listed within the bill, in only three areas. But, though background checks will be required, there is no discussion about what would be a disqualifier for working within the framework of the new Medical Marijuana Cannabis Pilot Program Act. The Kansas pharmacy background checks ensure that the candidate hasn't been convicted of any offenses connected to the pharmacy profession, such as the illicit sale or distribution of prohibited medications. This bill makes no effort to ensure that a candidate, working is the industry, hasn't been convicted of any offenses connected to the illegal distribution of prohibited drugs.

Kansas Association of Chiefs of Police • P.O. Box 780603 • Wichita, Kansas 67278-0603 • (316) 733-7300 • Fax: (316) 733-7301 • kacp@ksacp.net

In Sec. 6(c)7 the bill addresses the failure of a contract being executed prior to the date specified in the letter of intent. The bill indicates that that the medical cannabis operator shall cease cultivation activities until a contract is executed between the medical cannabis operator and the secretary. There are problems with regulating the behavior of the medical cannabis operator when there is no enforcement arm of the State that is being tasked with the duty to enforce the Act. Additionally, there is no provision in the bill that provides a process to follow in the event a contract is executed and there is product produced.

In Sec.7(a) The Act has no requirement for testing for the potency of Tetrahydrocannabinol (THC). It only says it will be tested. There is no requirement or regulation detailed in the event the weak standards are not met. There is more discussion about the cleanliness of laboratory premises than what happens with what is tested. It is as if the drafter has grabbed sections from several bills and mashed them all together in Sec. (7) of this bill. Product that doesn't pass testing is returned to the medical cannabis operator who submitted it for remediation or disposal. There is nothing in the bill that details what the remediation or the method of destruction will be, or the records kept of remediation or destruction. This is a problem that could lead to diversion of product to a secondary Black Market.

In Sec.7(c)(9) The Act describes the transport and disposal of unused medical cannabis products and waste. There is no process regulating and overseeing the transport and disposal process. Having no regulations in the bill opens opportunities for unscrupulous people to convert unused product to the secondary market, i.e. the Black Market.

In Sec. 7(h)(1) There is a provision for tracking the total amount of medical cannabis products tested, and the percentage certified as satisfying the requirements for use and consumption. This is a one direction approach that illustrates the one-sided approach in the Act. The evaluation should be a two-sided approach to include the percentage of cannabis not certified because it did not satisfy the requirements for use and consumption. This is a community health issue. In Sec. 7(h)(3) there is a similar description about the success of the laboratory standards and testing requirements. This section should also have a description of failures in the laboratory standards and testing.

In Sec. 8(d)(5) there is no mention that the packaging for cannabis products be bland in appearance and not enticing in appearance to children or minors.

Law enforcement in Kansas is very concerned about the diversion and theft of medical cannabis and medical cannabis products. There isn't even a requirement in the Medical Cannabis Pilot Program Act to require reporting of diversions of product to the police or any other law enforcement arm of the Kansas government for documentation and investigative purposes. When there is a finding of criminal acts, criminal neglect, or carelessness on the part of a manufacturer or distributor, what are the consequences. For those distribution hubs that do not take adequate precautions, there are no penalties detailed in the bill. Regulatory elements that should be in the bill are nearly non-existent.

In Sec.(9)(c) there are no regulations regarding the delivery of medical cannabis or products to the correct person. There is no verification process listed in the bill to guide delivery personnel on the steps required to ensure delivery to the correct person(s). There are also no provisions in the bill to account for lost/stolen certificates which would allow unauthorized persons to order products for delivery.

In Sec. (11), Kansas law enforcement has concerns about the disposition of and reason for the disposal of unused product. Additionally, the Secretary would be authorized to make changes to the Act without legislative input.

The elements of Sec. (12) detailing that smoking, combustion of medical cannabis product is laughable. The State, in this bill, is authorizing the sale of cannabis flower. Of course it will be smoked. This section also allows for inhalation of vapors by non-combustive means and then declares that inhaling the vapors is not vaporization. This is a reimaging of reality.

Section (13) of the bill contains wording that medical cannabis/products as approved and endorsed by the Kansas Legislature, should not be represented, or suggested that the cannabis is an effective treatment for any illness, disease, adverse condition, or malady, whether such illness or malady is a qualifying medical condition as detailed in the bill. **This is an enormous admission that there is no evidence that cannabis has a bona fide medical use.**

Senate bill SB555 is weak on regulation and enforcement throughout the text.

There are many reasons to be concerned with what is called medical marijuana. Physicians would be encouraged to write "certifications" attesting to the presence of dubious qualifying medical conditions that will allow for the purchase of medical marijuana products, including plant material. With some certainty, there will be violations when certificate holders light up and smoke the cannabis flowers. The certifying physician cannot dose the medical cannabis or medical cannabis product. They can only provide a certification. The person with the certification determines their own type of product and the amount they determine they need. This is not the way medicine works. Educated and regulated pharmacists cannot legally distribute it. It just cannot be regulated in a manner that other drugs are. That should frighten everyone.

The Kansas Association of Chiefs of Police has a duty to inform our elected legislators of the concerns we have and the unintended consequences we feel will be born out of SB555.

The Kansas Association of Chiefs of Police opposes passage of SB555 and urges you to not vote for legalization of medical marijuana in the state of Kansas.

Darrell G. Atteberry
Kansas Association of Chiefs of Police
Legislative Chair

Attachment 1 – Problems with SB555

Attachment 2 – List of Qualifying Medical Conditions

Attachment 3 – Qualifying Medical Conditions – Comments from the National Library of Medicine

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

Section	Sub Section	Page	Topic	Description
2	d	2	Caregiver definition	It is not clear if this is a paid position or a volunteer only position? Additionally, how many people can a single caregiver service?
5	(c)(1)	6	A certificate of good standing	Any certificate of good standing must be issued by the State of Kansas and no other state.
6	(c)	7	"If a contract has not be executed prior to the date specified in the letter of intent, such medical cannabis operator shall cease cultivation activities until a contract is executed between such medical cannabis operator and the secretary	What will the medical cannabis operator who fails to secure a contract do with product if the license is denied. This is not addressed in the bill. This could allow abuse in the medical cannabis pilot program act
6	(d)	7	A medical cannabis operator may contract with a person licensed as a hemp processor under the commercial industrial hemp act, K.S.A. 2-3901 et seq., and amendments thereto, to process medical cannabis into medical cannabis products.	This is at this point an unregulated expansion of the Commercial Hemp Act. While there is a testing and tracking provision, it will open the door for other requests for processing of hemp oil, and hemp by-products into consumables.
7	(a)	8	No batch of medical cannabis or medical cannabis products shall be sold unless a sample from such batch has been tested and certified for use or consumption by the state contracted laboratory. Each contract shall specify batch size, testing and certification requirements and the identity of the state contracted laboratory. The batch size for medical cannabis shall not be more than 10 pounds and the batch size for medical cannabis products shall not be more than five liters or the equivalent of such amount.	Shouldn't this be a test for THC potency?
7	(c)(9)	9	The transport and disposal of unused medical cannabis products and waste.	This needs considerably more oversight. There is an opportunity for unscrupulous people to convert unused product to the secondary market. (Black Market)

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

7	(h)(1)	9	The total amount of medical cannabis and medical cannabis products tested, and the percentage certified as satisfying the requirements for use and consumption;	This should include the percentage not certified because it did not satisfy the requirements for use and consumption.
7	(h)(3)	9	a description of the relative success of the laboratory standards and testing requirements required under the medical cannabis pilot program;	This section should also have a description of failures of the laboratory standards and testing requirements required under the Medical Cannabis Pilot Program Act
8	(a)(1)	10	The secretary may enter into a contract with one or more pharmacies to operate a distribution hub for the purpose of dispensing medical cannabis and medical cannabis products in this state. Each contract shall contain such terms and conditions as required by this act and such other terms and conditions as may be required and negotiated by the secretary. No term or condition of any such contract shall conflict, either directly or indirectly, with the provisions of this act. Each contract shall expire on or before July 1, 2029.	This allows for an unlimited number of pharmacies to be contracted with by the use of a boilerplate terms and conditions contract by the Secretary of Health and Environment. This non-restrictive language could likely make the Medical Cannabis Pilot Program Act much more than a pilot program.
8	(a)(4)	10	If the secretary finds that a pharmacy is in breach of any provision of the contract or in violation of any provision of this act, the secretary shall provide written notice of such breach or violation to such pharmacy. The pharmacy shall have 30 days from the receipt of such written notice to remedy the breach or violation unless the written notice provides a longer period of time or the parties to the contract agree to a longer period of time. If the pharmacy fails to remedy a breach or violation within the specified period of time, the secretary may terminate such contract.	Why 30 days? The remedy should be immediate for a pharmacy. There is no explanation of what would constitute a breach. The bill is so poorly written that there is no enforcement arm for the Secretary of Health and Environment. As a matter of fact, there is no traditional law enforcement arm of state government that has an oversight role over pharmacies/marijuana operators.

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

8	(b)	10	On or before September 1, 2024, the secretary shall determine if pharmacies are precluded from operating distribution hubs by federal law or regulations. If the secretary determines that pharmacies are precluded from operating distribution hubs, the secretary may enter into contracts with one or more medical cannabis operators for the operation of distribution hubs. A medical cannabis operator shall not operate more than seven distribution hubs. The provisions of section 4, and amendments thereto, shall apply to any contract entered into between the secretary and a medical cannabis operator pursuant to this section.	This particular part of the bill is laughable. Whether or not pharmacies may be precluded from operating distribution hubs by federal law or regulations should already be known. Conflicting federal and state law creates a scenario in which pharmacists can be acting lawfully under state law while simultaneously being at risk of federal prosecution. For this reason, in other states, pharmacists have been reluctant to be involved with medical marijuana. Federal prosecution could result in severe consequences such as fines and imprisonment. Another concern is that the pharmacy could lose its DEA registration, leading to the inability to dispense controlled substances. This verbiage creates a path to by-pass the legislative process to allow the medical cannabis operators to control the distribution without direct regulation.
8	(c)	10	Each distribution hub may obtain medical cannabis and medical cannabis products from one or more medical cannabis operators, including the operator that owns and operates such distribution hub. A distribution hub may sell and deliver medical cannabis and medical cannabis products to patients and caregivers in accordance with subsection (b).	There are no details on security plans for distribution between sites. Where are the requirements for a security plan for this inter-operator, inter-distribution hub transfer? There is no mention of record keeping of the inter-operator, inter-distribution hub transfers.
8	(d)(5)	11	comply with the packaging and labeling requirements of section 12, and amendments thereto.	There is no mention that the packaging should be bland in appearance and not enticing to children or minors.
8	(i)	11	Each distribution hub shall take reasonable measures to prevent diversion or theft of medical cannabis and medical cannabis products from any distribution hub or vehicle used for delivery that is operated by such distribution hub.	And if the distribution hub does not take reasonable measures to prevent diversion or theft of medical cannabis and medical cannabis products from a distribution hub or vehicle used for delivery, what is the penalty? What investigative arm of Kansas government is responsible for the investigation. What are the consequences? There is no requirement in the Medical Cannabis Pilot Program Act to report diversions of product to the police or any other law enforcement arm of the Kansas government

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

				for documentation purposes, investigation purposes, or prosecution.
9	(c)	12	A distribution hub may contract with one or more delivery service providers for the purpose of delivering medical cannabis and medical cannabis products to patients and caregivers. Such delivery service providers shall comply with applicable provisions of this act relating to the delivery of medical cannabis and medical cannabis products, vehicles used for such deliveries and individuals making such deliveries. The distribution hub shall be responsible for ensuring such compliance.	How is the distribution hub intending to ensure the delivery driver is delivering to the right person? While there are requirements for GPS tracking, dashboard cameras of uncertain quality, cameras in the interior of the vehicle of uncertain quality, there is no guarantee of compliance with the Act. There is no guidance provided in the act to instruct delivery personnel on the steps to ensure the product(s) are being delivered to the correct person(s). There is no provision in the Act to account for lost/stolen certificates which would allow unauthorized persons to order product for delivery.
10		12	Each distribution hub shall collaborate with the secretary in the collection of patient data through voluntary surveys completed by patients. Data collected via such surveys shall be collected by distribution hubs and may be used by the secretary for the purpose of studying medical cannabis. Such survey results shall be collected and compiled in a manner that protects against disclosure of patient identities. Distribution hubs shall provide patients and caregivers the option to participate in such surveys at such times that the patient or caregiver is receiving medical cannabis or medical cannabis products from the distribution hub.	There is no real explanation regarding the useful purpose or goal of the survey instruments other than to study medical cannabis. The survey pool is skewed to those already using marijuana products. This needs more clarification and direction.
11	(a)1,2,3.	12-13	(1) The total amount of medical cannabis cultivated and harvested; (2) the total amount of medical cannabis processed into medical cannabis products; (3) a description of the cultivation and processing	The report to the Secretary should also include the description of any product disposed of and the reason it was disposed of, the method used to dispose of the product, and the authorized facility that destroyed the product.

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

			procedures used and the relative effectiveness of such procedures;	
11	(b)(4)	13	any recommendations regarding any of the requirements of this act that would improve the medical cannabis pilot program or any subsequent medical cannabis program.	Will the unelected Secretary be authorized to make changes to the Act, without legislative input.
12	A	13	Only the following forms of medical cannabis may be dispensed under the medical cannabis pilot program: (1) Medical cannabis flower; (2) pills or tablets; (3) tinctures; (4) patches; or (5) ointments.	Will every flower, pill, tablet, tincture, patch, and ointment have a specific concentration level, purity level, and inert ingredients listed on every container of product dispensed? Will there be ingestion restrictions or warning labels on each package about the lack of dosage information on the product? Will there be overdose information posted on the packaging?
12	(b)	13	The smoking, combustion or vaporization of medical cannabis or medical cannabis products is prohibited. The inhalation of vapors released by the non-combustive heating of cannabis flower shall not be considered smoking or vaporization.	If there was not an expectation that the parts of the medical cannabis flower would be smoked, it would not be on the list. <u>The admonition in the Act that the smoking, combustion of the medical cannabis product is prohibited is laughable.</u> Otherwise, only pill or tablets, tinctures, patches, or ointments would be the only items offered in the Act. <u>Additionally, asserting that inhalation of vapors released by the non-combustive heating of cannabis flower shall not be considered smoking or vaporization is a reimaging of reality.</u>
13	(a)(1)	14	Representation or suggestion that any medical cannabis or medical cannabis product is an effective treatment for any illness, disease, adverse condition or malady, whether such illness, disease, condition or malady is a qualifying medical condition;	If the Medical Cannabis Pilot Program Act can't even claim that cannabis is an effective treatment for an illness, disease, etc. is a glaring commentary on the claim that cannabis has a medical use.
13	(b)(7)	15	statement that indicates or implies that the product or entity in the advertisement has been approved or endorsed by any agency, officer or agent of the state of Kansas or any person or entity associated with the state.	<u>The fact that cannabis would be sold with action by the Kansas Legislation means cannabis/marijuana will be approved and endorsed by the Kansas Legislature.</u>

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

15	(a)	15	No distribution hub shall be located within 1,000 feet of the boundaries of a parcel of real estate having situated on it a school, public library or public park.	What about churches and synagogues and other places of worship?
15	(f)(3)	16	"school" means any public or private preschool, elementary, middle or high school or other attendance center for kindergarten or any of the grades one through 12.	This list does not include pre-schools and licensed child care locations.
Sec. 16	(a) (1)-(4)	16	Security equipment	While there is a provision for security, there is no provision for the quality or security level of the security equipment.
Sec. 16	(a) (5)(A) (B)	16	Alarm system notification	This is an unfunded mandate. Alarm companies handle the alarm systems for businesses, not law enforcement.
Sec. 16	All	16	On-site security	There is no provision for on-site security and who would be allowed to work for the marijuana industry. Current, serving law enforcement officers should be precluded from employment for any facet of the industry.
Sec. 16	(b)(2)	17	(2) store all video recordings for at least 90 days in a secure location on or off the premises or through a secure service or network that provides on-demand access to such recordings. All such recordings shall be made available upon request to the secretary and any law enforcement agency, its officers and agents; and	180 days
Sec. 16	(e)	17	(e) Except as provided in subsection (b)(2), each medical cannabis operator and pharmacy shall retain all documents related to security equipment and measures and any other documents related to the operations of the facility for a period of two years. Such documents shall be made available upon request to the secretary.	What happens after two years with no requirement to keep the documents? This should be an on-going practice with no sundown.
Sec. 17	(a)	18	(a) All individuals holding an ownership interest in or actively	The background checks should ensure that the candidate hasn't been convicted of any offenses

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

			engaging in the operations of a medical cannabis operator or a distribution hub operated by a pharmacy shall not have been convicted of a felony. Each medical cannabis operator and pharmacy shall take reasonable measures to ensure compliance with this section, including, but not limited to, conducting criminal history background checks. Each operator and pharmacy shall maintain an employee roster and log that includes the identity, address, contact information and criminal history background check information for each employed individual.	including drug offenses, theft, embezzlement, felony or not, domestically or from foreign lands. Owners should not have business interests in: (i) People's republic of China, including the Hong Kong special administrative region; (ii) (ii) republic of Cuba; (iii) (iii) Islamic republic of Iran; (iv) (iv) democratic people's republic of Korea; (v) (v) Russian federation; and (vi) (vi) Bolivarian republic of Venezuela. (B) "Country of concern" does not include the republic of China (Taiwan). There is not a discussion about the depth of the criminal history background check or what would disqualify an candidate for employment.
Sec. 17	(b)	18	(b) All directors, managers, officers and any other employee of a medical cannabis operator or pharmacy shall be considered to be actively engaged in the operations of such operator or pharmacy. Independent contractors shall not be considered to be actively engaged in operations if such contractors are not directly engaged in the cultivation, processing or sale of medical cannabis or medical cannabis products.	Pharmacy workers who find the consumption of Federally illegal drugs as a moral flaw will be labeled as actively engaged in the distribution of marijuana, by statute.
18	(a)	18	(a) A financial institution that provides financial services to any medical cannabis operator, pharmacy or state contracted laboratory shall be exempt from any criminal law of this state, an element of which may be proven beyond a reasonable doubt that a person provides financial services to a person who possesses, delivers or manufactures medical cannabis or medical cannabis products, including any of the offenses specified in article 57	This is an extraordinarily broad grant of immunity not found currently in Kansas law.

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

			of chapter 21 of the Kansas Statutes Annotated, and amendments thereto, or any attempt, conspiracy or solicitation specified in article 53 of chapter 21 of the Kansas Statutes Annotated, and amendments thereto, if the medical cannabis operator, pharmacy or state contracted laboratory is in compliance with the provisions of this act and all applicable tax laws of this state.	
Sec. 18	(b)	18	(b) Upon the request of a financial institution, the secretary, medical cannabis operator, pharmacy or state contracted laboratory shall provide to the financial institution the following information: (1) Whether a person with whom the financial institution is seeking to do business has a contract with the secretary to operate as a medical cannabis operator, operate a distribution hub or a state contracted laboratory; (2) the name of any other business or individual affiliated with such person; and (3) information relating to sales and volume of product sold by such person, if applicable. (c) Information received by a financial institution under subsection (b) is confidential. Except as otherwise permitted by any other state or federal law, a financial institution shall not make the information available to any person other than the customer to whom the information applies and any trustee, conservator, guardian, personal representative or agent of such customer.	Shouldn't this be pursuant to a warrant?

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

Sec. 19		19	The secretary shall designate at least five physicians for the purpose of issuing medical cannabis certificates to patients. Designated physicians may issue medical cannabis certificates to patients suffering from a qualifying medical condition when such patient's primary care physician declines to issue such certificate for any reason. To the extent practicable, the secretary shall designate physicians from different parts of the state to ensure patients are able to have reasonable geographic access to such physicians.	Where is the record keeping on applications taken and granted or denied? Designated sounds like the physicians don't have an option when selected by the secretary. Poorly designed.
Sec. 20	(c)(1)	19	Physician is the patient's primary care physician or a physician designated by the secretary pursuant to section 19, and amendments thereto, and determined that the patient suffers from one or more qualifying medical conditions;	So, there is not a minimum length of time as a physician's patient? It can be for as little as one minute or more.
Sec. 20	(c)(2)		(2) physician has reviewed the patient's medical records and has reasonably determined that such patient is not currently or likely to be diagnosed with schizophrenia after taking into consideration such patient's family history of schizophrenia;	What patient records? Those from a lifetime of treatment by a family physician, or what has been provided on a simple questionnaire to one of the physicians designated by the secretary. And, schizophrenia, the one thing medical cannabis won't positively impact.
Sec. 20	(c)(4)		physician reasonably believes that the benefits of medical cannabis use by the patient outweigh its risks after considering the patient's history of substance abuse and the potential detrimental effects of medical cannabis use on the patient's health;	What is the age limit for a certification by a physician? This section is non-specific and would allow a certification to any minor child.
Sec. 20	(d)(4)(C)	20	the physician recommends the patient treat the symptoms of the qualifying medical condition by consumption of medical cannabis and medical cannabis products;	A physician will have no control what is obtained by the patient. The patient can select plant matter, tablet, tincture, etc. it is the certificate holders call. The certificate holder can select the concentration and determine their own dosage. This is not modern medicine.

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

Sec. 20	(h) (h)(1),(2)	21	A physician who issues a medical cannabis certificate shall be exempt from liability for any injuries or other damages arising from or otherwise related to the purchase, possession or consumption of medical cannabis or medical cannabis products by the patient or caregiver, if any, named on such certificate if, at the time such certificate is issued, such physician:	A blanket release from liability. Would this be done for any other purpose in Kansas State Statutes? (1)Believes the patient is not pregnant. No testing is required by the bill. If the review of the patient's records is by one of the State designated physicians as referenced in Sec. 19, then the medical history will be minimal and lacking to make an informed decision about the patient. (2)Similar to what is in (1), If the review of the patient's records is by one of the State designated physicians as referenced in Sec. 19, then the medical history will be minimal and lacking to make an informed decision about the patient.
Sec. 21	All	22	Law enforcement agencies may obtain verification of a medical cannabis certificate from a patient's physician or a distribution hub when necessary to verify that a patient or caregiver is in compliance with this act. Each patient and caregiver shall promptly deliver such patient's medical cannabis certificate upon demand of any officer of a court of competent jurisdiction or any law enforcement officer when the certificate is in such patient's or caregiver's immediate possession at the time of the demand.	This section describes how law enforcement may obtain verification of a medical cannabis certification. The problem is that this information will only be available during business hours, Monday through Friday and no weekends, holidays, or vacations. This does not say it must be physically handed over to the officer. This must be clear that it is the physical certificate and not a photographic copy of the certificate. Additionally, there is no penalty assigned to the refusal to present the physical certificate upon demand of a law enforcement officer.
Sec. 22	(b)	22	A patient shall not purchase medical cannabis or medical cannabis products in an amount that exceeds in the aggregate 200 grams of unprocessed medical cannabis flower or 3.47 grams of tetrahydrocannabinol contained in any medical cannabis product during any 30-day period of time.	Two-hundred grams/.44 pounds, of medical cannabis seems like a lot of plant matter for anyone not smoking the plant matter. A marijuana cigarette contains about 1 gram of marijuana. A person would have to smoke about 7 marijuana cigarettes a day to consume 200 grams in a thirty-day timeframe. And regardless if the bill says it cannot be smoked, it will be. This is a huge amount of marijuana for one individual for 30 days.
Sec. 22	(c)	22	Caregivers who hold a valid medical cannabis certificate on which such individual is the designated caregiver may purchase and possess medical cannabis, medical cannabis products, paraphernalia and accessories used to administer or consume medical cannabis and medical cannabis products on	The way this read, the Caregiver could get product for the patient from one distributor and the Patient could get product from another distributor. The two could go from distributor to distributor and game the system. There is no way for distribution hubs to cross-check past purchases, balances on available 30-day amounts that can be purchased, and whether the

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

			behalf of the patient named on the medical cannabis certificate, and may reasonably assist such patient with using or consuming medical cannabis and medical cannabis products. The provisions of subsection (b) shall apply to the purchase of medical cannabis and medical cannabis products by a caregiver. No other use or consumption of any medical cannabis or medical cannabis products purchased and possessed by a caregiver on behalf of a patient shall be permitted.	Patient of the Caregiver have been to other distribution hubs. This is ripe for abuse.
Sec. 23	All	23	Nothing in this act authorizes the secretary to oversee or limit research conducted at a postsecondary educational institution, academic medical center or private research and development organization that is related to cannabis and is approved by an agency, board, center, department or institute of the United States government, including any of the following: (a) The agency for health care research and quality; (b) the national institutes of health; (c) the national academy of sciences; (d) the centers for Medicare and Medicaid services; (e) the United States department of defense; (f) the centers for disease control and prevention; (g) the United States department of veterans affairs; (h) the drug enforcement administration; (i) the food and drug administration; and (j) any board recognized by the national institutes of health for the purpose of evaluating the medical value of healthcare services.	No research can be conducted by or assisted with by any person in the United States on a Temporary or Student visa who is from a country adversarial to the United States to include: (vii) People's republic of China, including the Hong Kong special administrative region; (viii) (ii) republic of Cuba; (ix) (iii) Islamic republic of Iran; (x) (iv) democratic people's republic of Korea; (xi) (v) Russian federation; and (xii) (vi) Bolivarian republic of Venezuela. (B) "Country of concern" does not include the republic of China (Taiwan).
Sec. 25	(a)(b)(c)	24	On or before January 15 of each year, the secretary shall prepare and submit a report to the governor and the legislature on the medical cannabis pilot program.	While we believe it is good to evaluate successes, it is also beneficial to track short-comings and failures.

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

			Each report shall contain: (a) The information submitted by each medical cannabis operator in the reports required pursuant to section 11, and amendments thereto; (b) a description by the secretary of the relative success of policies, procedures, standards and requirements imposed under the medical cannabis pilot program; and (c) any recommendations from the secretary that would help make the medical cannabis pilot program and any subsequent cannabis-related program successful.	This portion of the bill only focuses on the successes of the Act and does not give any attention to the failures that will likely occur. This unbalanced approach will give the impression and illusion that nothing has gone wrong with the execution of the Act. We feel this is a bad business model.
Sec. 26	All	24	The provisions of the medical cannabis pilot program act are declared to be severable. If any part or provision of the medical cannabis pilot program act is held to be void, invalid or unconstitutional, such part or provision shall not affect or impair any of the remaining parts or provisions of the medical cannabis pilot program act, and any such remaining provisions shall continue in full force and effect.	There are critical sections of this bill that depend on other provisions of this bill. To have a section on severability is not a wise position to take. It could likely be that a critical portion of the bill may be found unconstitutional. All transactions should stop at that point.
Sec. 28	All	24, 25	It shall be unlawful to store (b) Violation of this section is a class A person misdemeanor. (c) As used in this section: (1) "Medical cannabis" and " medical cannabis product" mean the same as such terms are defined in section 2, and amendments thereto; and (2) "readily accessible" means the medical cannabis or medical cannabis product is not stored in a locked container that restricts access to such container solely to individuals who are 21	As we read this section, it indicates that on July 1, 2029 it will be lawful to store or otherwise leave medical cannabis or a medical cannabis product where it is readily accessible to a person under 21 years of age. Such conduct shall be unlawful with no requirement of a culpable mental state. **All restrictions in the bill end on July 1, 2029.**

Provided by the Kansas Association of Chief of Police

Below is a listing of areas of concern in SB555. While this is not an exhaustive list, it illustrates why this legislation is not good for the people of Kansas.

Attachment 1

			years of age or older. (d) This section shall be a part of and supplemental to the Kansas criminal code. (e) The provisions of this section shall expire on July 1, 2029.	
Sec. 35	(a)	27	A tax is hereby imposed upon the privilege of selling medical cannabis and medical cannabis products in this state by any medical cannabis operator at the rate of 8% on the gross receipts received from the sale of medical cannabis and medical cannabis products to patients and caregivers holding a valid medical cannabis certificate as authorized by the medical cannabis pilot program act, section 1 et seq., and amendments thereto. The tax imposed by this section shall be paid by the patient or caregiver at the time of purchase.	For every $1,000,000 gross receipts from the sale of cannabis products,8% tax is collected. That is only $80,000 to the general fund. Is the 8% in addition to the existing state sales tax, or only 8% as no state sales tax would be collected? The bill is not clear.
			Upon receipt of each such remittance, the state treasurer shall deposit the entire amount in the state treasury. Subject to the maintenance requirements of the medical cannabis refund fund established by section 38, and amendments thereto, an amount equal to 20% of such deposit shall be credited to the medical cannabis research and education fund established by section 39, and amendments thereto, and the remaining amount of any such deposit shall be credited to the state general fund.	For every $1,000,000 gross receipts from the sale of cannabis products,8% tax is collected. That is only $80,000 to the general fund. Twenty percent of the $80,000, or a mere $16,000 would go to the research and education fund and $64,000 would go to the State General Fund. This is a woefully low amount for research.

There is so much more in the rest of the bill that should cause pause and concern about moving forward with SB555.

Darrell Atteberry
Legislative Chair
Kansas Association of Chiefs of Police

List of "Qualifying medical condition" in SB555 and conclusions from the National Library of Medicine

Attachment 2

Section	Sub-section	Page	Condition	National Library of Medicine https://www.ncbi.nlm.nih.gov/
2	(u)(1)	3	Acquired immune deficiency syndrome	See attachment 1. **…more research is needed to study the long-term effects of cannabis use on pulmonary/respiratory diseases, immune function and the risk of infection transmission, and the molecular/genetic basis of immune dysfunction in chronic cannabis users.**
2	(u)(2)	3	Amyotrophic lateral sclerosis	See attachment 1. …. there is a valid rationale to propose the use of cannabinoid compounds in the pharmacological management of ALS patients. Cannabinoids indeed are able to delay ALS progression and prolong survival.
2	(u)(3)	3	Autism	See attachment 1. Cannabis and cannabinoids may have promising effects in the treatment of symptoms related to ASD, and can be used as a therapeutic alternative in the relief of those symptoms. **However, randomized, blind, placebo-controlled clinical trials are necessary to clarify findings on the effects of cannabis and its cannabinoids in individuals with ASD.**
2	(u)(4)	3	Cancer	See attachment 1. Nausea and vomiting associated with cancer treatment: Research has shown that an active ingredient in marijuana, tetrahydrocannabinol (THC), effectively reduces nausea and vomiting in people undergoing chemotherapy. This section just mentions Cancer. There is no mention of undergoing chemotherapy or other treatments that cause prolonged discomfort.
2	(u)(5)	3	Chronic traumatic encephalopathy	See attachment 1. Marijuana is not recommended as an accepted treatment for the many of the diseases or damage that affects the brain.
2	(u)(6)	3	Crohn's disease	See attachment 1. Data supporting the use of marijuana for the management of IBD are extremely limited. **Further well-designed studies are needed before any positive conclusions regarding marijuana use can be drawn.**
2	(u)(7)	3	Epilepsy or another seizure disorder	See attachment 1. There is an increasing interest in developing cannabis preparations for the treatment of drug-resistant epilepsy as they are observed to be more efficacious with less side effect profile. **Hence, we encourage research in this area in order to help**

				decrease the morbidity and mortality associated with drug-resistant epilepsy.
2	(u)(8)	3	Fibromyalgia	See attachment 1. There remains a growing interest in the use of cannabinoids as potential treatment options for fibromyalgia. While some studies show promising results, others have been inconclusive. **Overall, the effectiveness of these cannabinoids in treating fibromyalgia remains uncertain.**
2	(u)(9)	3	Multiple sclerosis	See attachment 1. This study looks at the impact of various cannabis administration routes on MS patients with varying symptoms. It found indications that cannabis will support the efficacy of cannabinoids, namely through an oromucosal **spray and orally**, in the treatment of pain and spasticity, which are the most common symptoms in MS patients. In general, adverse effects were modest to moderate, although special attention should be exercised in patients with multiple sclerosis.
2	(u)(10)	3	Parkinson's disease	See attachment 1. **More research is required to study the effects of marijuana in patients with PD, for which treatment is limited.**
2	(u)(11)	3	Post-traumatic stress disorder	See attachment 1. There are also many important unanswered questions such as the potential of addiction and psychosis in the management of PTSD. Based on the limited and low-quality evidence, there is a need for more rigorous RCTs with larger sample sizes to explore all benefits and harm outcomes prior to commissioning cannabis for the management of PTSD.
2	(u)(12)	3	Sickle cell anemia	See attachment 1. **In summary, the role of cannabis in treating the vaso-occlusive crises (VOCs) of patients with Sickle Cell Disease (SCD) needs further exploration.** The longitudinal questionnaire study in Jamaica showed no relation between the use of cannabis and the clinical severity of SCD. This study showed a negative correlation between the use of cannabis and the frequency of VOCs that required hospitalization. **Controlled trials that utilize standardized doses of cannabis are needed to clarify the role of cannabinoids in the treatment of sickle cell pain**. Such a trial is in its early phase.
2	(u)(13)	3	Spinal cord disease or injury	See attachment 1. **Larger randomized controlled trials on reliable and specific cannabis products are required to**

List of "Qualifying medical condition" in SB555 and conclusions from the National Library of Medicine

Attachment 2

				disentangle their role as disease-modifying or analgesic agents in the context of SCD without the confounding effect of other substances.
2	(u)(14)	3	Traumatic brain injury	See attachment 1. **We conclude that randomized controlled trials and prospective studies with appropriate control groups are necessary to fully understand the efficacy and potential adverse effects of medical cannabis for TBI.**
2	(u)(15)	3	Ulcerative colitis	See attachment 1. **These studies failed to demonstrate that when given cannabis, patients with IBD had an improvement in inflammatory markers or mucosal healing on endoscopy compared to patients with IBD in placebo conditions.**
2	(u)(16)	3	Pain that is either chronic or severe or intractable	See attachment 1. **Our results show robust associations between increased frequency of daily cannabis use and worse clinical pain and associated symptoms among medical cannabis patients with chronic pain.**

Darrell Atteberry
Legislative Chair
Kansas Association of Chiefs of Police

Information from the National Library of Medicine on SB555 Qualifying Medical Conditions
Attachment 3

1. Acquired immune deficiency syndrome

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Research suggests a link between cannabis, immune function, and viral infections. Cannabis use may be associated with adverse effects on immune function and, thereby, increase the risk of acquiring or transmitting infections such as HIV and HCV. However, data are not sufficiently strong to suggest that cannabis use adversely affects the progression of viral diseases. Cannabis use is also associated with adverse respiratory/pulmonary complications such as chronic cough and emphysema, and the impairment of immune function. However, it is also evident that cannabis or its constituents, including THC and CBD, have some beneficial effects such as improving appetite and food intake in patients with HIV/AIDS and positive effects in patients with hepatic steatosis. **Nevertheless, as suggested above, more research is needed to study the long-term effects of cannabis use on pulmonary/respiratory diseases, immune function and the risk of infection transmission, and the molecular/genetic basis of immune dysfunction in chronic cannabis users.**

2. Amyotrophic lateral sclerosis

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

In light of the above findings, there is a valid rationale to propose the use of cannabinoid compounds in the pharmacological management of ALS patients. Cannabinoids indeed are able to delay ALS progression and prolong survival. However, most of the studies that investigated the neuroprotective potential of these compounds in ALS were performed in animal model, whereas the few clinical trials that investigated cannabinoids-based medicines were focused only on the alleviation of ALS-related symptoms, not on the control of disease progression. This remains the major challenge for the future and it may be facilitate by the recent approval of the first cannabinoid-based drug (Sativex®) available for clinical use. In the last years, a growing interest is focused on the combination drug approach with existing medications in order to maximize the therapeutic efficacy and minimize the adverse effects commonly observed with conventional therapies. We strongly hope to have provided a short but important overview of evidences that are useful to better characterize the efficacy as well as the molecular pathways modulated by cannabinoids. We hope that our studies could be an alert to encourage the scientific community to further studies to confirm the therapeutic use of cannabinoids in this devastating disease.

Information from the National Library of Medicine on SB555 Qualifying Medical Conditions
Attachment 3

3. Autism

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Some studies showed that cannabis products reduced the number and/or intensity of different symptoms, including hyperactivity, attacks of self-mutilation and anger, sleep problems, anxiety, restlessness, psychomotor agitation, irritability, aggressiveness perseverance, and depression. Moreover, they found an improvement in cognition, sensory sensitivity, attention, social interaction, and language. The most common adverse effects were sleep disorders, restlessness, nervousness and change in appetite.

Cannabis and cannabinoids may have promising effects in the treatment of symptoms related to ASD, and can be used as a therapeutic alternative in the relief of those symptoms. **However, randomized, blind, placebo-controlled clinical trials are necessary to clarify findings on the effects of cannabis and its cannabinoids in individuals with ASD.**

4. Cancer

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Nausea and vomiting associated with cancer treatment: Research has shown that an active ingredient in marijuana, tetrahydrocannabinol (THC), effectively reduces nausea and vomiting in people undergoing chemotherapy.

This section just mentions Cancer. There is no mention of undergoing chemotherapy or other treatments that cause prolonged discomfort.

5. Chronic Traumatic Encephalopathy

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

The same as traumatic brain injury.

6. Crohn's Disease

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Of the 334 studies initially reviewed, 1 trial in UC and 2 trials in Crohn's disease met eligibility. For UC, 29 patients were treated with marijuana and 31 with placebo/standard of care. There was no difference in failure to achieve clinical remission (relative risk [RR] 1.02, 95% confidence interval [CI] 0.76-1.37) or response (RR 0.99, 95%CI 0.65-1.21). Adverse events occurred in all patients receiving marijuana (RR 1.28, 95%CI 1.05-1.56). For Crohn's disease, 21 patients were

treated with marijuana and 19 with placebo/standard of care. There was no difference in failure to achieve clinical remission (RR 0.72, 95%CI 0.47-1.12) or failure to achieve clinical response (RR 0.15, 95%CI 0.02-1.05). Adverse events were not reported per patient. The quality of evidence was low to very low using GRADE methodology.

Data supporting the use of marijuana for the management of IBD are extremely limited. **Further well-designed studies are needed before any positive conclusions regarding marijuana use can be drawn.**

7. Epilepsy or another seizure disorder

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

There is an increasing interest in developing cannabis preparations for the treatment of drug-resistant epilepsy as they are observed to be more efficacious with less side effect profile. **Hence, we encourage research in this area in order to help decrease the morbidity and mortality associated with drug-resistant epilepsy.**

8. Fibromyalgia

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

The use of cannabis in fibromyalgia treatment is still an area of ongoing study. CBD and THC have been studied for their potential therapeutic benefits in a variety of medical conditions with manifestations of pain and sleep disturbances. These cannabinoids interact with the body's endocannabinoid system, which plays a role in regulating pain, mood, and other physiological processes, suggesting that they could play a role in managing the cardinal symptoms of fibromyalgia.

There remains a growing interest in the use of cannabinoids as potential treatment options for fibromyalgia. While some studies show promising results, others have been inconclusive. **Overall, the effectiveness of these cannabinoids in treating fibromyalgia remains uncertain.** Our investigation revealed that they may be effective in reducing pain and improving sleep in fibromyalgia patients, but more studies are needed to strengthen these findings.

The use of cannabinoids for medical purposes is still relatively new, and much is still unknown. To understand the potential benefits, risks, and optimal dosages and formulations, there is more work to be done through clinical trials. Overall, there remains a potential role for cannabinoids in the management of fibromyalgia, despite currently limited evidence. **Nonetheless, more research on this topic is needed to confirm the efficacy of cannabinoids, ascertain the most effective THC–CBD formulation, determine a more standardized assessment for clinical outcomes, and analyze long-term outcomes.**

Information from the National Library of Medicine on SB555 Qualifying Medical Conditions
Attachment 3

9. Multiple Sclerosis

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

This study looks at the impact of various cannabis administration routes on MS patients with varying symptoms. It found indications that cannabis will support the efficacy of cannabinoids, namely through an oromucosal **spray and orally**, in the treatment of pain and spasticity, which are the most common symptoms in MS patients. In general, adverse effects were modest to moderate, although special attention should be exercised in patients with multiple sclerosis.

10. Parkinson's Disease

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

PD is debilitating and can manifest as both motor and non-motor symptoms including bradykinesia, resting tremor, rigidity, and depression. The current treatment provides a cure for the motor symptoms, but only in the initial phase, and has side-effects of its own. Self-medication with marijuana has improved many symptoms including bradykinesia, tremor, rigidity, depression, sleep, and pain. **However, the use of marijuana comes with short-term and long-term effects including cognitive problems.** It is observed that long-term use of marijuana is needed for its result of taking place, which can also place an individual for risk of the dependence of the illicit drug. **More research is required to study the effects of marijuana in patients with PD, for which treatment is limited.**

11. Post-traumatic stress disorder

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Over the last decade, PTSD has been more frequently listed as a reason for patient request of cannabis. However, there is a dearth of evidence examining the benefits and harms associated with cannabis use in PTSD patients. **The current evidence regarding the use of cannabis to manage PTSD is limited and based on low quality evidence.** Thus, our findings should be interpreted cautiously in the context of low-quality evidence due to the inclusion of studies with a small sample size, non-randomized trials, and biases in sampling strategies. There are also many important unanswered questions such as the potential of addiction and psychosis in the management of PTSD. Based on the limited and low-quality evidence, there is a need for more rigorous RCTs with larger sample sizes to explore all benefits and harm outcomes prior to commissioning cannabis for the management of PTSD.

More pragmatic RCTs that compare the effects of cannabis with other pharmacological agents or psychotherapies, and with longer follow-up periods, are required to determine the effectiveness

of cannabis in the management of PTSD on various patient-important outcomes. However, given that the majority of eligible studies for our review were observational, we recommend the following suggestions for future investigations. This way, findings from observational studies with smaller samples, which are often more feasible, can still aid in the scientific understanding of how cannabis impacts PTSD symptoms. Although they may not be representative of the entire PTSD population individually, systematic reviews and meta-analyses can coalesce their data to make larger scale conclusions. For example, varying subpopulations such as individuals from inpatient and outpatient facilities, and veteran populations can be recruited. Another factor that must be considered during recruitment from different geographical regions is cannabis legality. Legalization of cannabis is typically followed by an increased acceptance of cannabis use. Additionally, researchers can increase the quality of their studies by having blind evaluators, providing assessment training, and ensuring that treatments are carried out as planned to minimize contamination. Also, future studies that use interviews as a method of data collection are encouraged to employ the Structured Clinical Interview for DSM, which is the gold standard for diagnostic interviews. As well, studies using self-report methods can opt for the PTSD Symptom Scale-Self Report and PTSD Diagnostic Scale.

It is imperative that future research explores the impact of different cannabis preparations, methods of administration, dosages, and frequencies of use in the management of PTSD. The methodology of studies must be strictly applied so conclusions can be accurately made regarding therapeutic use. For example, the type of cannabis administered must be kept consistent amongst all participants. Ultimately, although available literature provides promise for the use of cannabis in the management of PTSD, further studies of higher quality are necessary to more adequately inform clinical guidelines.

Key points

1) Low-quality evidence, mainly from single-arm observational studies, showed that cannabis was significantly associated with a reduction in overall PTSD symptoms, improvement in quality of life and overall function, but not with return to work.

2) A single cross-over RCT showed that nabilone was significantly associated with a reduction in overall PTSD symptoms.

3) Overall, cannabis was well tolerated. Dropout rates due to adverse effects, inefficacy, and all-cause dropouts were not consistently reported among the included studies.

4) The most common adverse effects were dry mouth, headaches, and agitation.

5) As current evidence is based on low-quality, single-arm observational studies with small sample sizes, more pragmatic RCTs comparing cannabis effectiveness with other pharmacological agents and psychotherapies with longer follow-up times and larger sample sizes are required to make stronger conclusions about cannabis effectiveness in PTSD management.

12. Sickle Cell Anemia

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

In summary, the role of cannabis in treating the vaso-occlusive crises (VOCs) of patients with Sickle Cell Disease (SCD) needs further exploration. The longitudinal questionnaire study in Jamaica showed no relation between the use of cannabis and the clinical severity of SCD. This study showed a negative correlation between the use of cannabis and the frequency of VOCs that required hospitalization. **Controlled trials that utilize standardized doses of cannabis are needed to clarify the role of cannabinoids in the treatment of sickle cell pain**. Such a trial is in its early phase.

13. Spinal cord disease or injury

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

The complex nature of Spinal Cord Disease (SCD) and its resultant intractable pain make disease management and optimization of analgesia extremely difficult, even with aggressive opioid-based approaches. The paucity of clinical evidence for the effects of cannabis and cannabinoids in SCD is largely due to a lack of rigorously controlled studies; however, the findings from our and other clinical studies indicate positively toward the analgesic potential of cannabis in treating pain arising from SCD and other disease states. The development of a mechanism-based understanding of the effect of cannabinoids on pain, cognitive function, addiction, organ pathology and other comorbidities of SCD is critically needed in pre-clinical and clinical studies. Several major challenges preclude drawing uniform outcomes of cannabinoid use in SCD, which include heterogenous products ranging from medical cannabis to over-the-counter products, as well as unreliable products contaminated with toxic substances, use of other drugs, smaller cohorts in clinical studies, simultaneous use of opioids, stigmatization and variability in presentation, severity and duration of pain. **Larger randomized controlled trials on reliable and specific cannabis products are required to disentangle their role as disease-modifying or analgesic agents in the context of SCD without the confounding effect of other substances.**

14. Traumatic brain injury

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

There is not a single pharmacological agent with demonstrated therapeutic efficacy for traumatic brain injury (TBI). With recent legalization efforts and the growing popularity of medical cannabis, patients with TBI will inevitably consider medical cannabis as a treatment option. Pre-clinical TBI research suggests that cannabinoids have neuroprotective and psychotherapeutic properties. **In contrast, recreational cannabis use has consistently shown to have detrimental effects.** Our review identified a paucity of high-quality studies examining the beneficial and adverse effects of medical cannabis on TBI, with only a single phase III randomized control trial.

However, observational studies demonstrate that TBI patients are using medical and recreational cannabis to treat their symptoms, highlighting inconsistencies between public policy, perception of potential efficacy, and the dearth of empirical evidence**. We conclude that randomized controlled trials and prospective studies with appropriate control groups are necessary to fully understand the efficacy and potential adverse effects of medical cannabis for TBI.**

15. Ulcerative Colitis

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Patients with Inflammatory Bowel Disease (IBD) often experience pain, nausea, and decreased appetite. As described here, in multiple studies, patients with IBD reported a significant improvement in symptoms and quality of life metrics with the use of cannabis. While initially promising, additional double-blind, placebo-controlled studies have found that even though **CBD** may improve perceived symptoms, it does not reduce inflammation or address underlying disease activity. **These studies failed to demonstrate that when given cannabis, patients with IBD had an improvement in inflammatory markers or mucosal healing on endoscopy compared to patients with IBD in placebo conditions.** Thus, in many circumstances, patients with IBD would benefit more from maintenance therapy optimization than from the initiation of cannabis as adjuvant therapy.

These studies also suggest that additional investigations are warranted to further elucidate the role of cannabis in the treatment of IBD.

16. Pain that is either chronic and severe or intractable

National Library of Medicine
https://www.ncbi.nlm.nih.gov/

Our results show robust associations between increased frequency of daily cannabis use and worse clinical pain and associated symptoms among medical cannabis patients with chronic pain. The trend of these effects is similar to that of frequent, daily opioid use among individuals with chronic pain. These findings highlight the need for publicized cannabis use guidelines that are focused on harm reduction and delineate between cannabinoid effects and the pros and cons of different administration routes. **Future prospective longitudinal studies that adequately characterize dosing are needed to examine whether and how these trends hold in individuals using medical cannabis.**