



College of
Public Health

The Iowa Medical Cannabidiol Program: A Survey of Iowa Physicians

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Cannabis and Older Persons Study at the University of Iowa

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Medical Cannabis Use and Older Persons

- Clinicians report rapidly increasing rates of cannabis use among older adults
- Based on national survey data from 2006-2013, Han et al. (2017) found:
 - 58% relative increase in past-year cannabis use for adults aged 50-64
 - 250% relative increase in past-year cannabis use for adults aged 65 years and older
- **Age-related health care needs are driving the increasing use of medical cannabis among persons over 50**

PUBLIC POLICY & AGING REPORT®



There's Something
Happening Here:
Exploring the Evolving
Intersection Between
Cannabis and Older
Persons

PEER-REVIEWED PUBLICATIONS

- Kaskie B, Ayyagari P, Milavetz G, Shane D & Arora, K. The increasing use of cannabis among older Americans: A public health crisis or viable policy alternative? The Gerontologist. 57, 6, 1166-1172, 2017.
- Arora K., Qualls S. Bobitt J, Lum H., Milavetz G., Croker J, & Kaskie B. Measuring attitudes towards medical and recreational cannabis among older adults in Colorado. The Gerontologist, DOI: 10.1093/geront/gnz054, 2019.
- Bobitt, J, Qualls, S, Arora K, Croker J & Kaskie B. Emerging themes concerning the increasing use of cannabis among older adults. Drugs and Aging, 36, 7, 655-666. DOI: 10.1007/s40266-019-00665-w, 2019.
- Lum H, Arora K, Croker J, Qualls S, Schuchman M, Bobitt J, Milavetz G, & Kaskie B. Recreational and medical marijuana patterns of use and health impact: A survey of older adults. Gerontology and Geriatric Medicine. DOI: 10.1177/2333721419843707. 2019.
- Arora K., Qualls S. Bobitt J, Milavetz G., Croker J, & Kaskie B. *Lifetime cannabis use patterns among older adults in Colorado.*
- Croker, JA et al. *Assessing health related outcomes of medical cannabis use among older persons: Findings from Colorado and Illinois*
- Bobitt J et al. *Clinical and contextual conditions shaping the use of opioids or cannabis to treat pain*

The Role of Healthcare Providers

- Most state require physicians certification for medical cannabis program participation
- Older patients look to medical providers for expert advice
- ***Healthcare providers play a critical role in facilitating patient access to medical cannabis***

Iowa's Medical Cannabidiol Program

- Governor Branstad signed the Iowa Medical Cannabidiol (MC) Act into law in May of 2017
- In Iowa, only physicians (MD or DO) are currently able to certify a patient's condition, and do not require training or a specific certification to do so
- As of October 2019, about 900 unique Iowa physicians have certified approximately 5,000 patients for various qualifying conditions
 - "Untreatable pain" most commonly certified qualifying condition
 - About 43% of program population above 60 years in age

Research Questions

- What are physicians attitudes toward medical cannabis?
- What is the level of knowledge physicians possess about cannabis?
- What are the key characteristics of those physicians who participate in the Iowa Medical Cannabidiol Program?

Methods

Survey Instrument:

31-item questionnaire based on instruments developed in similar studies conducted in Colorado, Washington state, Minnesota and Canada

Constructs:

- Attitudes about cannabis
- Knowledge on cannabis pharmacology, safety, benefits and Iowa MC program
- Concerns affecting participation in the Iowa MC program
- Patient interactions relating to MC and certification behavior
- Topics for future training on MC
- Demographics and practice characteristics

Methods

Recruitment:

- Electronic survey distributed via email through the Iowa Board of Medicine to all licensed physicians in the state (N=13,477) during April-May 2019
- 60% (N=8,086) opened the email and 1,008 clicked on the link
- Received 742 complete responses = response rate of approximately 10% (742/8,086)
- Study data were collected and managed using Research Electronic Data Capture (REDCap) hosted at the University of Iowa

Methods

Statistical Analyses

- Summarized characteristics of all providers in the sample using means and sample proportions
 - Examined characteristics of certifying physicians as a subset
- Performed ordered logistic regressions to examine associations between provider characteristics and provider knowledge levels associated with medical cannabis and the Iowa MC Program

Results:

Descriptive Statistics

Table 1a: Sample characteristics [Means (SD), Sample Proportions] of Iowa Physicians (N=742)

Age in years (SD)		56 (13)
Female (%)		26
MD (%)		80
Actively treating patients (%)		89
Years in practice (SD)		24 (13)
Total number of patients treated in last 30 days (%)		
	<i>Under 50</i>	22
	<i>Between 50-99</i>	19
	<i>Between 100-250</i>	32
	<i>Over 250</i>	28
Specialist (%)		64
Practice Type (%)		
	<i>Private practice/independent physician</i>	7
	<i>Group practice - NO hospital admitting privileges</i>	5
	<i>Group practice with hospital admitting privileges</i>	11
	<i>Outpatient clinic part of larger health network</i>	19
	<i>Hospital</i>	36
	<i>Other</i>	22
Hospital/Practice has formally approved med. cannabis certification (%)		16
Nature of patient interactions concerning cannabis (%)		
	<i>Helped patient/caregiver find forms to participate in IA prog.</i>	11
	<i>Educated patient/caregiver about IA prog.</i>	15
	<i>Discussed benefits and/or risks of med. cannabis with patient/caregiver</i>	27
	<i>Helped a patient find a physician who will certify for their condition</i>	4
	<i>Discussed outcomes of use with a med. cannabis user</i>	27
	<i>No interaction on this topic</i>	51
Certified patient for medical cannabidiol in IA (%)		11
N		77/742

Results:

Descriptive Statistics

Table 1b: Characteristics of certifying physicians (N=77)

Number of patients certified (%)		
	<i>1-5 patients</i>	68
	<i>6-15 patients</i>	29
	<i>Over 15 patients</i>	3
Length of care period prior to certification (%)		
	<i>Less than a month</i>	3
	<i>between a month and a year</i>	26
	<i>over a year</i>	71
Influential factors in the decision to certify (%)		
	<i>Experiences with individuals who have used med. cannabis</i>	13
	<i>Available research</i>	10
	<i>Peers (other health care providers)</i>	3
	<i>Continuing Medical Education</i>	9
	<i>Health care organization's policy</i>	1
	<i>The patient had failed other treatment options</i>	64

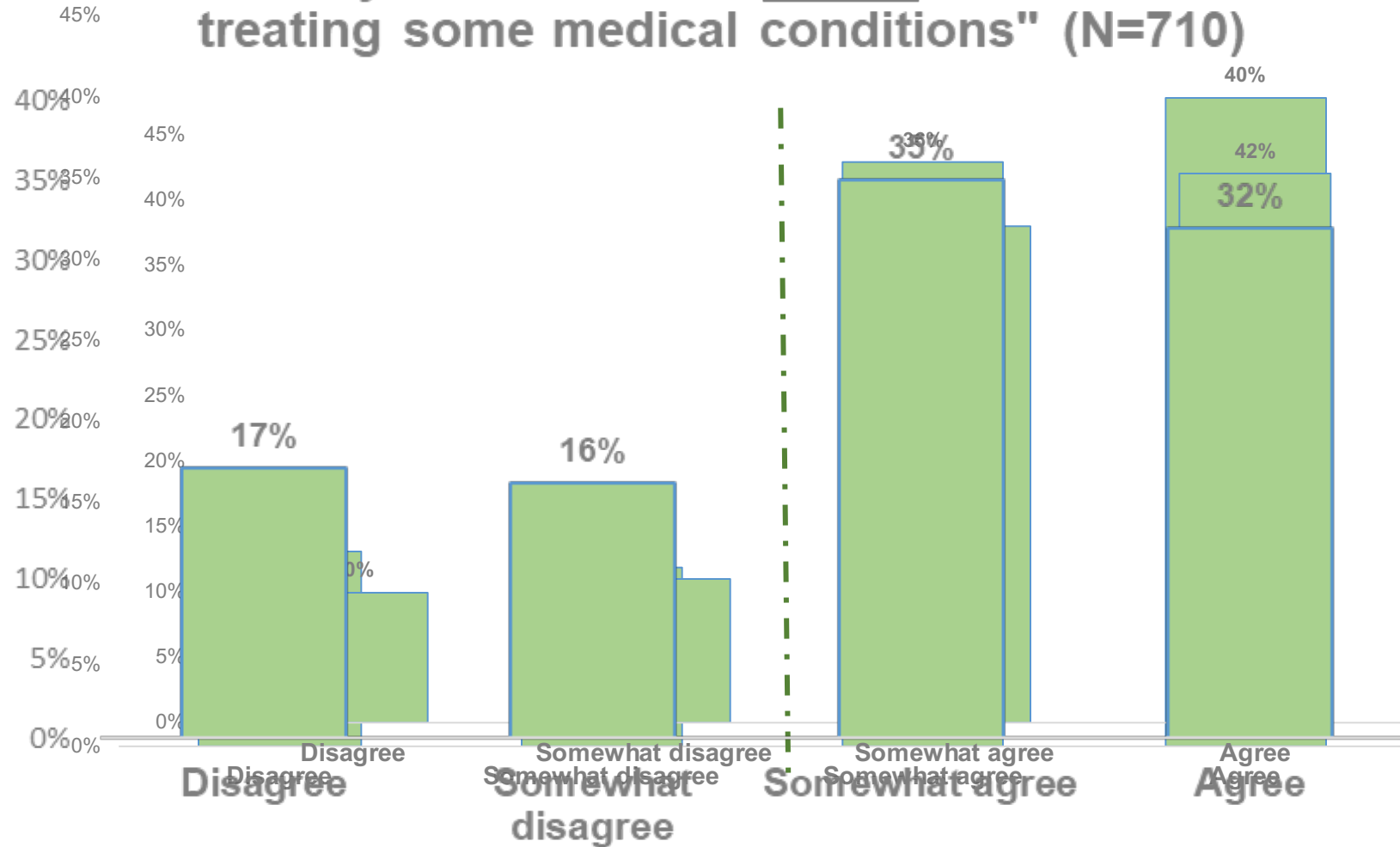
Comparison with other states

Comparison of IA clinical sample with that in other state studies

- Gender (WA, CO, and NY: majority of respondents were women; MN – 46% were women)
- Mean age (WA: 45 years; MN: 46 years; CO: 50 years)
- Percent reporting ever certifying a patient's condition for medical cannabis: (WA: 27%; CO: 31%; MN: 26%)

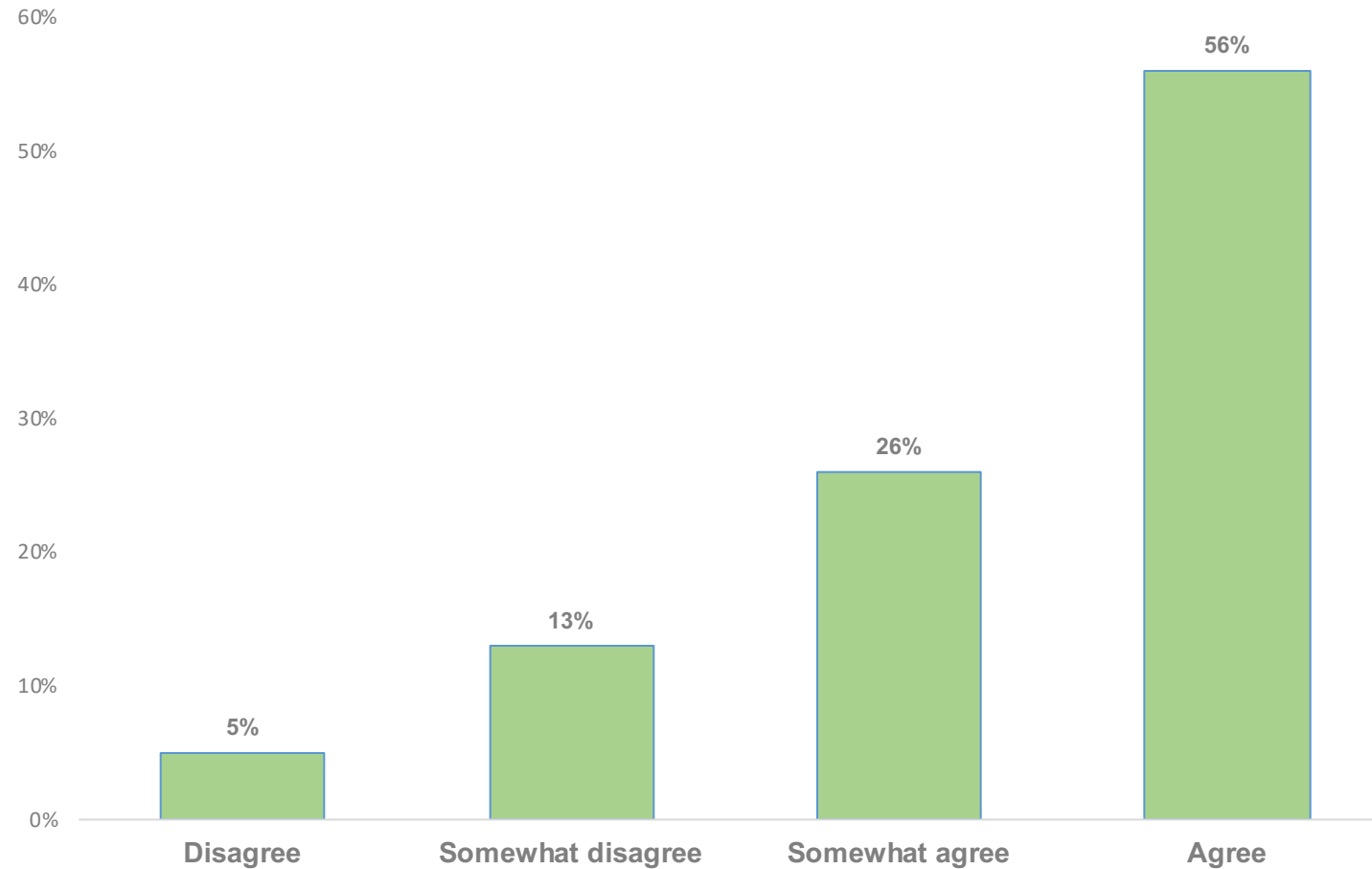
Results: Attitudes

"Cannabis extracts/products containing cannabidiol (CBD) are useful in treating some medical conditions" (N=710)



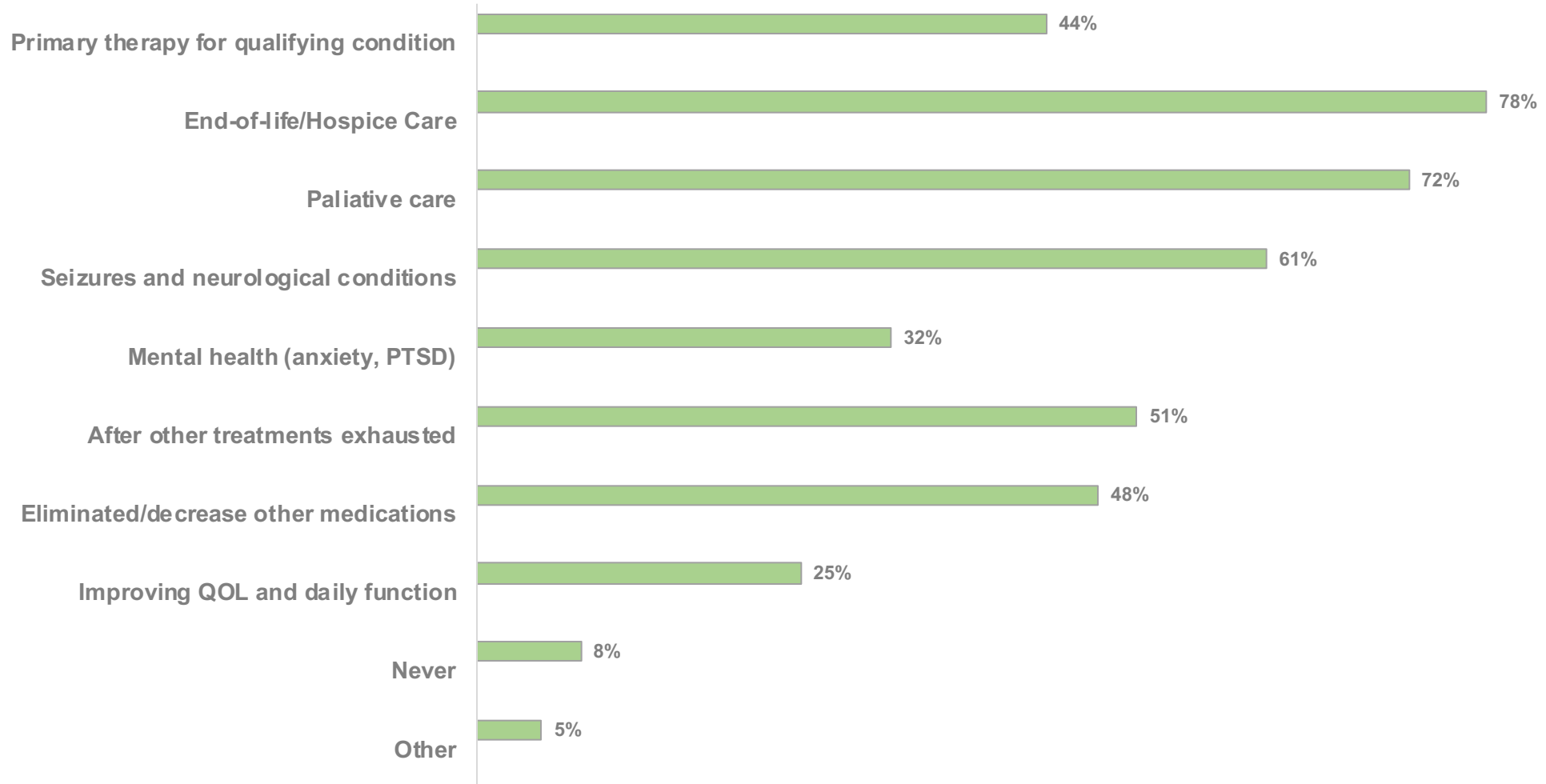
Results: Attitudes

"Tetrahydrocannabinol (THC) can be addictive" (N=708)



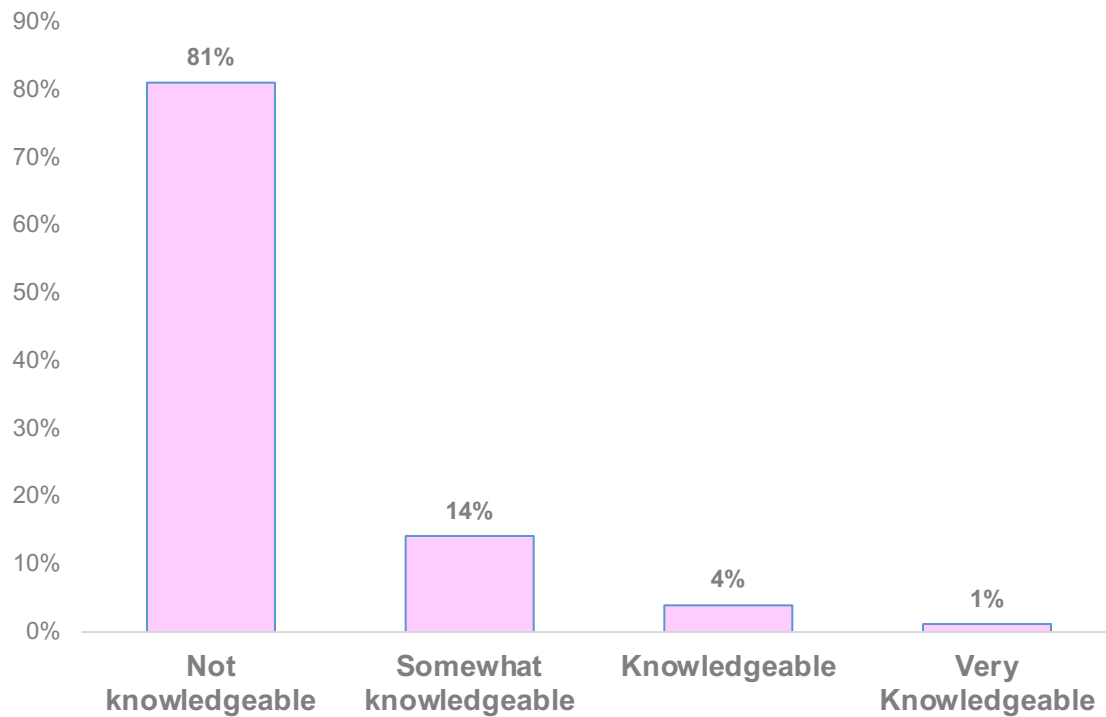
Results: Beliefs

"Circumstances in which CBD is acceptable as a medical therapy"

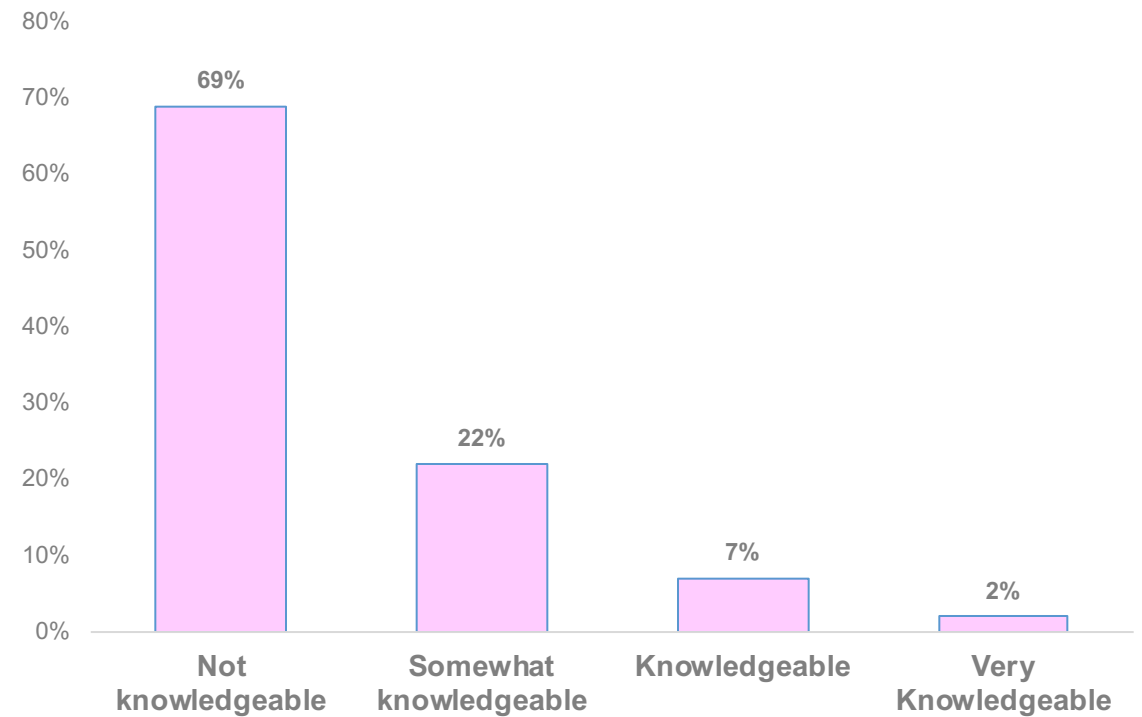


Results: Knowledge

Titration schedules for medical cannabidiol
(N=717)

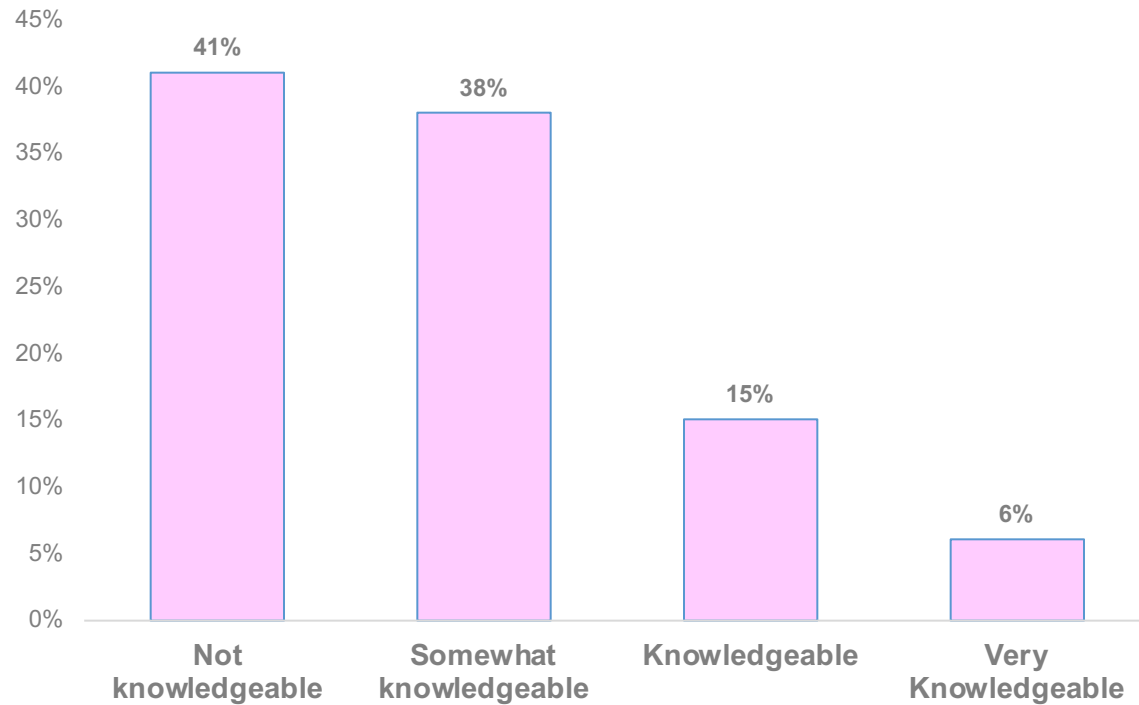


Formulations of medical cannabidiol available in Iowa
(N=715)

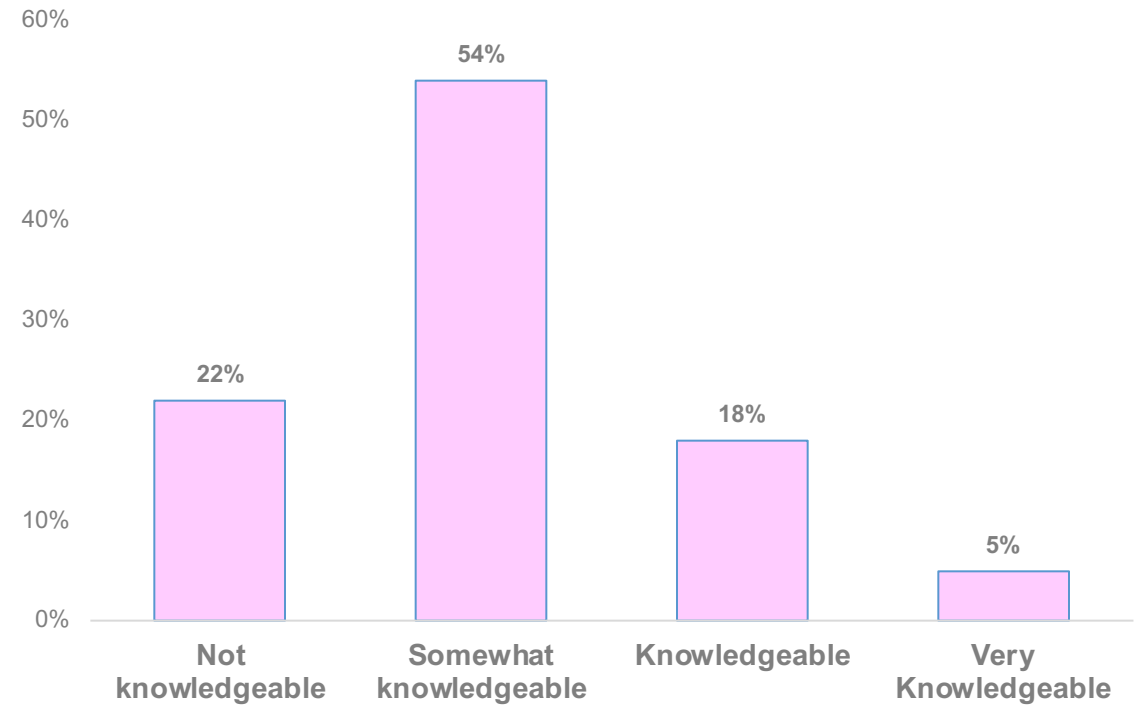


Results: Knowledge

Safety, side effects, contraindications, and precautions of using medical cannabidiol (N=716)

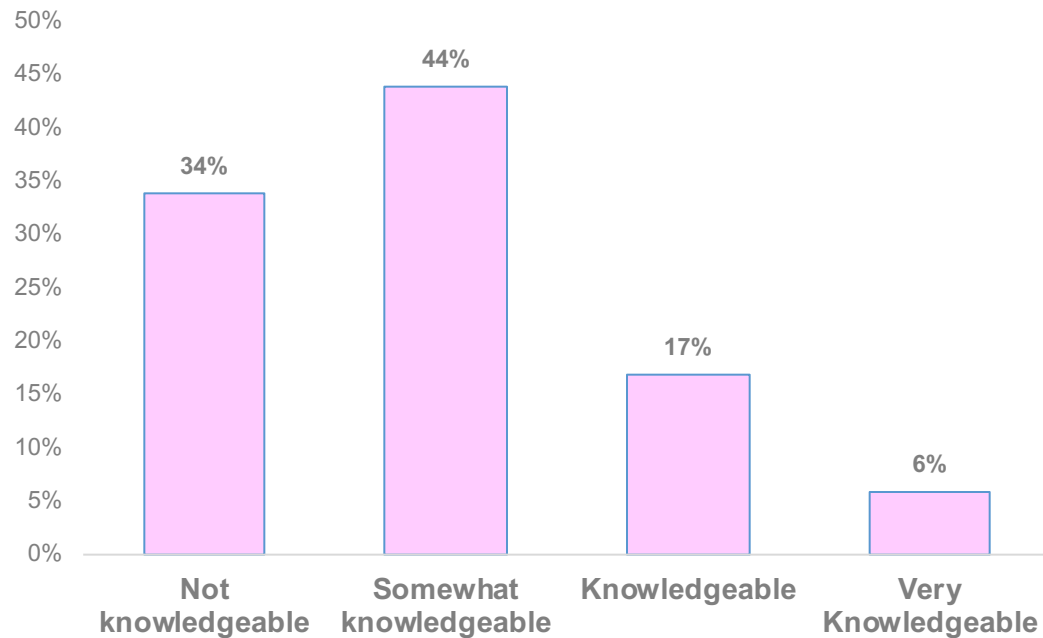


Potential therapeutic benefits of medical cannabidiol (N=715)

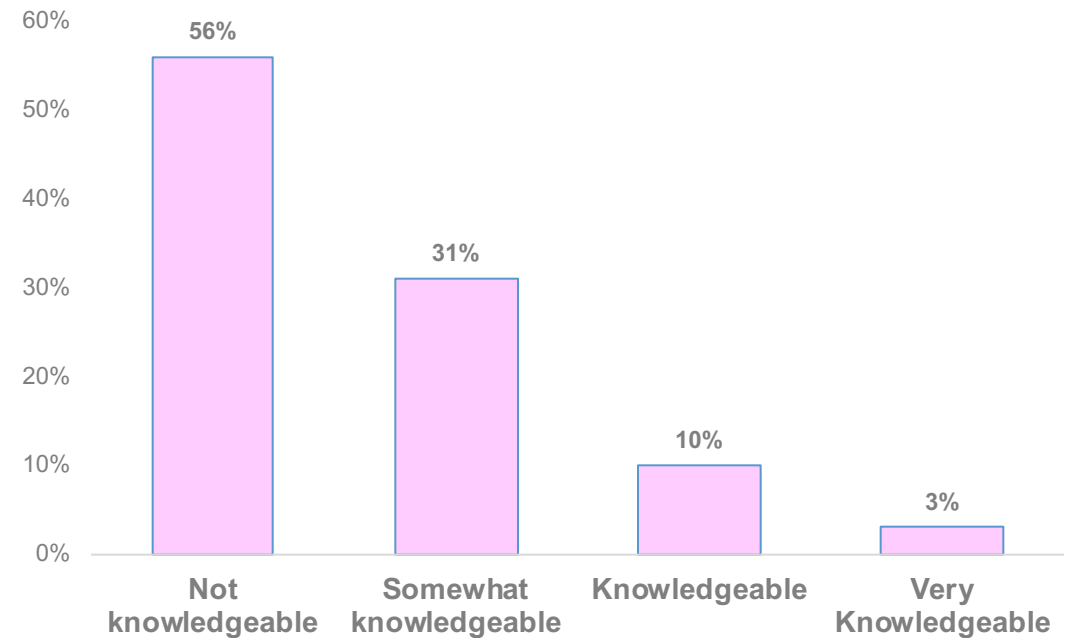


Results: Knowledge

Mechanism of action of cannabinoids (i.e., the endocannabinoid system) N=715



Iowa's Medical Cannabidiol Program rules, regulations and processes (N=712)



Results:

Associations

Table 2: Odds Ratios from Ordered Logits Predicting Physician Knowledge on Cannabis

	(1)	(2)	(3)	(4)	(5)	(6)
	Titration	Formul.	Safety	Benefits	Mechanism	IA Program
Certified previously	2.40**	4.97***	2.95***	2.15**	1.17	7.71***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.55)	(0.00)
Female	0.62	0.90	0.74	0.89	0.83	1.12
	(0.08)	(0.66)	(0.12)	(0.53)	(0.31)	(0.75)
Age	1.03	0.99	1.00	0.99	0.99	1.00
	(0.09)	(0.62)	(0.93)	(0.55)	(0.39)	(0.94)
M.D	0.69	0.71	0.74	0.64*	0.75	0.56**
	(0.15)	(0.13)	(0.14)	(0.02)	(0.15)	(0.00)
Actively treating patients	0.76	0.89	1.51	0.9	1.03	1.28
	(0.56)	(0.78)	(0.26)	(0.79)	(0.95)	(0.53)
Patient volume						
<i>Between 50-99</i>	0.96	1.02	1.33	0.89	1.28	1.11
	(0.92)	(0.95)	(0.33)	(0.70)	(0.41)	(0.74)
<i>Between 100 to 250</i>	1.02	0.99	1.35	1.22	1.56	1.31
	(0.95)	(0.99)	(0.26)	(0.46)	(0.11)	(0.36)
<i>Over 250</i>	0.60	0.80	1.12	1.09	1.30	1.04
	(0.19)	(0.52)	(0.69)	(0.75)	(0.38)	(0.90)
Specialist	0.97	1.28	1.46*	1.23	1.15	0.88
	(0.90)	(0.24)	(0.04)	(0.27)	(0.43)	(0.50)
Years in practice	0.98	1.01	1.00	1.00	1.01	1.00
	(0.16)	(0.31)	(0.78)	(0.82)	(0.39)	(0.88)
Practice type						
<i>Independent</i>	2.44*	1.11	0.84	1.39	1.09	1.39
	(0.01)	(0.76)	(0.60)	(0.30)	(0.79)	(0.31)
<i>Grp prac - no hosp priv.</i>	1.56	0.62	0.71	0.77	1.37	1.07
	(0.32)	(0.27)	(0.35)	(0.46)	(0.34)	(0.84)
<i>Grp prac - w/ hosp priv.</i>	0.96	0.63	0.52*	0.50**	0.46**	0.51
	(0.92)	(0.17)	(0.01)	(0.00)	(0.00)	(0.30)
<i>Outpatient clinic</i>	1.23	1.28	0.83	0.90	0.71	1.26
	(0.48)	(0.31)	(0.49)	0.64	(0.13)	(0.32)
Hospital/network policy	1.28	1.40	1.18	1.12	1.56	2.16***
	(0.39)	(0.17)	(0.46)	(0.64)	(0.05)	(0.00)
N	565	564	565	564	563	564

Notes: p values in parenthesis. *p<0.05; **p<0.01; ***p<0.001

Discussion

- Gap between physician attitudes toward cannabis and self-perceived knowledge on cannabinoid pharmacology (esp CBD v THC)
- Qualifying conditions: End of Life and Palliative Care
- CEUs and clinician training on MC
- Cannabis-related knowledge and role of provider institutions

Qualifying Conditions in Other States

- Pain (Chronic, Post Surgical)
 - Arthritis (Rheumatoid, Osteoarthritis)
 - Cancer (Emaciation, Nausea)
 - Fibromyalgia
 - Neuromuscular Disorders (Spasticity, tremors)
 - PTSD
-
- Palliation and Hospice

Continuing Medical Education in Other States

Provider Institutions



- **Cannabis and Cannabinoids (PDQ®): Integrative, alternative, and complementary therapies - Health Professional Information [NCI]**

Next Steps

- Surveillance of program participants
- Supply side conditions
- Program implementation and Evaluation

THANK YOU