Role of Pharmacists in Delivery of Patient Care Within Legalized Medical Marijuana States With a Defined Role for the Pharmacist

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Background

- More than half of the states in the United States have legalized medical marijuana and some states which have legalized it for recreational use
- Since marijuana is considered a Schedule I drug, research and studies regarding its pharmacological use and pharmacokinetics are limited
- Even with limited data and lack of education in pharmacy schools, some states including Connecticut, Minnesota, New York, and Pennsylvania still require physicians or pharmacists on site to counsel patients
- Other studies have looked into regulatory practices, pharmacist comfort with marijuana products, and barriers to care
- No study at this time has looked at current dispensaries and what type of patient care is provided there
- The purpose of this study is to explore the roles of both pharmacists and lay employees for patrons of medical marijuana dispensaries as well as discuss the quality and type of care that is provided in order to determine the overall efficacy and benefit of pharmacist counseling

Specific Aims

Describe and characterize role of the pharmacist and lay employee within medical marijuana dispensary.

Describe and differentiate between type and quality of care delivered between both groups.

Variable Selection

- All respondents must be 21 years of age or older and employed by a dispensary located in Connecticut, Minnesota, New York, or Pennsylvania
- Pharmacists must be a registered pharmacist (RPh) in the above listed states

Methods

- Eligible dispensaries were identified through each state's medical marijuana dispensary database. Ten dispensaries in each of the five states were selected at random to be contacted for a total of 50 possible dispensaries with 100 possible respondents
- Calls were made to the dispensary and 34 questions were asked to both a lay employee as well as a pharmacist at the site. These questions included demographic and patient counseling questions
- Patient counseling questions were broken into categories: patient interaction, background knowledge, patient assessment, patient recommendations, and clinical/patient outcomes
- Reponses were recorded electronically by the authors on UA Qualtrics software and then analyzed with frequencies and percentages for demographic data (#1-8) and Chi-Squared for patient assessment related questions (#9-34). A p value of < 0.05 was determined to be significant

Data

Demographic Data of Study Respondents

	Total Number	Percentage
Age		
21-29 years	6	46.2%
Over 30 Years	7	53.8%
Gender		
Male	5	38.5%
Female	8	61.5%
Race		
White	9	68.2%
Non-White	4	30.8%
State		
Arkansas	2	15.4%
Connecticut	5	38.5%
Minnesota	3	23.1%
Pennsylvania	3	23.1%
Population		
Less than 100,000	5	38.5%
More than 100,000	8	61.5%
Job		
Pharmacist	7	53.8%
Non-pharmacist	6	46.2%
Practicing as RPh		
1-5 years	2	28.6%
More than 5 years	5	71.4%
Years Employed		
Less than 1 year	4	30.8%
1-5 years	9	69.2%
Hours Worked		
Less than 40 hours	9	69.2%
More than 40 hours	4	30.8%

Questions with Associated Chi-Squared p-values

Question	P-Value	Question	P-Value
9	0.097	22	**0.008**
10	**0.033**	23	**0.002**
11	0.097	24	0.135
12	0.429	25	0.097
13	0.906	26	All 'no' responses
14	0.335	27	**0.033**
15	0.725	28	0.261
16	0.097	29	0.416
17	0.097	30	0.155
18	0.053	31	All 'yes' responses
19	0.164	32	All 'yes' responses
20	0.391	33	All 'yes' responses
21	All 'no' responses	34	All 'yes' responses

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Results

- Demographic data showed well-distributed subject selection between the two groups across all categories
- New York was not included as none of the dispensaries were willing to participate
- Six of the patient assessment questions had no p-value as all respondents had the same response including all positive responses to the patient and clinical outcomes questions (#31-34), and none of the respondents asking about exercise habits (#21) nor performing physical assessments (#26)
- Of statistically significant results, pharmacists responded positively more than lay employees specifically in asking about comorbidities, personal use, illicit drug use, and product formulation

Conclusions

- Both pharmacists and lay employees perform various assessments during their discussions with patients
- Pharmacists, overall, ask more medication related and assessment-type questions compared to lay employees
- Lay employees have a broader range of assessments performed from little to no interaction with the patient to very in depth conversations which can lead to varied patient experience

Implications

- Although some lay employees perform comparable assessments to a pharmacist – having a pharmacist guarantees that there is a baseline of knowledge and involvement with patients care
- As medical marijuana industry continues to grow and more states legalize medical use it would be beneficial to look towards employing pharmacists to ensure optimal patient care

Limitations

- Low respondent numbered based on willingness to participate and reluctance to speak over the phone regarding job duties
- Clinically significant information was gathered from discussion but small sample size prevents statistical significance from emerging in the data itself

Future Projects

- There are many different potential projects associated with pharmacist care in the medical marijuana industry
- It is important to compare type of care received in non-pharmacist mandated dispensaries to see how their care differs
- This study showed that pharmacists do have a role in medical marijuana industry so that further projects could investigate how the pharmacist impacts the patient experience from patient point-of-view