The Illinois Patient Experience: Impact of the Medical Cannabis Pilot Program



medical marijuana patients or licensed caregivers only blease remove hats and sunglasses

4. About Aclara Research

3. Health care and market

1. Background and executive

2. Methodology and research

summary

findings

implications

Table of Contents

Aclara Research ★ 2

Background

The Illinois Medical Cannabis Pilot Program

The Compassionate Use of Medical Cannabis Pilot Program Act was signed into law in 2013. Illinois became the 20th state to legalize medical cannabis with 41 qualifying debilitating conditions for treatment. Industry observers have labelled the Illinois program as one of the most restrictive in the country - based on the condition list, and patient application requirements which include a criminal background check and fingerprinting.

As of April 2017, almost 18,000 Illinois residents are registered medical cannabis patients – and they are finding relief from their daily battle with many attributes of chronic pain. Although chronic pain is not a qualifying condition in Illinois, 86% of survey respondents are managing the leading symptoms of severe and chronic pain – trouble sleeping, back and joint pain, and anxiety – as a result of their condition. Cannabis shows strong potential in treating autoimmune diseases such as arthritis, fibromyalgia and multiple sclerosis in which chronic inflammation plays a central role in the disease. ²

Medical Cannabis Potential Savings to Illinois Medicaid spending:

\$180Million



Twenty nine states offer legal access to medical cannabis, and eight have expanded to include adult use cannabis sales

IMPACT OF MEDICAL CANNABIS ON HEALTH CARE COSTS:

Across the United States, symptoms of chronic pain impact over 130 Million Americans at a cost of \$635 Billion annually¹ Study respondents indicate that 33% of Illinois patients STOPPED using all prescription drugs after using medical cannabis. Applying these results to a recent study on the impact of medical cannabis on Medicaid costs⁹ would result in \$180 Million savings to the Illinois Medicaid program.



\$180 Million in Medicaid savings is based on (1) Illinois prescription drug spending \$1.8B (2) 40% of participating adults in the Medicaid program impacted by chronic pain conditions and (3) Average Rx spending per participant of \$934

Aclara Research \star 3

The Illinois Patient Experience

Executive Summary

Aclara Research has conducted the first study of Illinois patients since the inception of the medical cannabis pilot program. This study of 296 respondents is the largest and most comprehensive study of the impact of the program on the patient experience – which includes perceived efficacy, cannabis usage and purchase behavior.

The study focused on five key areas of the patient experience:

- Demographics: Who is the patient?
- Need States: Why are patients using cannabis?
- Health Care: What is the impact of cannabis on prescription drug usage?
- Usage Behavior: How are patients using cannabis products for symptom relief?
- Spending and Retail Experience: How are patients buying and selecting cannabis products?

Five key insights emerged from this study which illuminate the impact of the medical cannabis

program on registered patients in Illinois, and particularly on women – who are disproportionately impacted by autoimmune conditions resulting in chronic pain in America.







Methodology and Research Findings



Methodology We used a mixture of qualitative and quantitative methods for this study



Qualitative

Aclara Research partnered with the Illinois Medical Cannabis Community, an online community of Illinois medical cannabis patients and adult use consumers.

We explored qualitative insights across key focus areas and invited members to respond. Topics included:

- Doctor and patient communication
- Commonly experienced symptoms
- Perceived product efficacy
- Retail experience and product selection



Quantitative

We fielded a 71 question online survey across 296 adult respondents from the cannabis online community.

269 Illinois medical cannabis patients27 Adult use consumers

We collected quantitative data on the following topics:

- Demographics
- Need States and usage drivers
- Health Care, Pain Levels and prescription drugs
- Product usage, dosing and methods of administration
- Patient spending, retail experience and product selection

The study was fielded in February 2017 and represented 1.5% of the Illinois patient registry.



Research Findings: 86% of patients suffer with symptoms of chronic pain

There are 41 qualifying conditions in Illinois - and five common symptoms that patients treat with medical cannabis. Women index 10% - 50% higher for these symptoms than men.



Across the 41 specific conditions required to access medical cannabis in Illinois, there are five common symptoms across patients – which are the driver of their cannabis usage. Trouble sleeping, body ache, back pain and anxiety are the leading symptoms across respondents – and female patients index ten to fifty percent higher for these symptoms than men. A 2009 study in the Journal of Pain found that women have a substantially higher risk of developing chronic pain conditions, such as multiple sclerosis and rheumatoid arthritis. Autoimmune diseases impact women three times more frequently than men.²

Finding relief from these symptoms - which impact over 130 Million Americans - is the first step in the patient path to purchasing cannabis. Despite the fact that severe and chronic pain is not a qualifying condition in Illinois, 86% of patients are using medical cannabis to manage chronic pain symptoms.

Impact to women with chronic pain conditions:

Not only are women more likely to suffer from chronic pain conditions, but their reports of pain are likely to be disregarded by their doctor as "emotional" and "not real".⁵ This may lead to additional prescriptions to treat mental health issues that may not even exist.

Express Scripts, an industry leader of pharmacy benefit management services, indicate that nearly 60% of patients taking opioid pain treatments for long term conditions were prescribed potentially dangerous mixtures of medications. Women accounted for nearly two thirds of those taking these potentially hazardous mixes of medications.⁶



Research Findings: 33% of respondents stopped using prescription drugs after using cannabis



Consistent with previous Aclara Research studies across medical cannabis markets, cannabis provided sufficient pain relief to eliminate prescription drug usage and manage multiple symptoms of pain and discomfort.

In Illinois, 33% of respondents stopped using prescription drugs – and 92% decreased the number of prescription drugs used.

Researchers at the University of Georgia have linked medical cannabis legalization to a decrease in Medicaid costs of \$1 - \$3.8Billion.⁹

Applying rates of chronic pain incidence to the adult Illinois Medicaid participant base, the state could save over \$180 Million - and improve patient health outcomes for patients using cannabis to relieve their symptoms.

100 Million adults suffer with chronic pain conditions.¹ Applying Total US metrics to adult Medicaid participants in Illinois could decrease prescription drug costs by \$180 Million.





Research Findings: Twenty two percent of patients are new cannabis users – and this is driven by women

Across the United States, women have lower usage levels of cannabis than men* - and this is evident across the Illinois patient base. Implications for retailers and manufacturers include staff training, product labelling, patient education and outreach.



Across markets, most medical cannabis patients have experience using cannabis before becoming a registered patient. Aclara Research studies across Michigan, Oregon and Colorado indicate less than 6% of patients are completely NEW to using cannabis when they become a registered patient. In this regard, the Illinois patient base differs significantly from medical marijuana programs in different states.

Twenty six percent of female respondents began using cannabis for the first time upon registering for the program, contrasted with 12% of male respondents.

This underscores the need for comprehensive education and outreach across the state, as well as the need for trained and knowledgeable dispensary staff members at retail. Sixty two percent of patients indicate that the dispensary staff member is the leading influencer of product selection in store. Patients, and particularly female patients – have an increased need for product knowledge, usage and education regarding cannabis product choice and dosing.



The Illinois Patient Experience

*Gallup, One in Eight US Adults Say they Smoke Marijuana, August 2016. Women 7% and Men 12%



Research Findings: Increasing use of Cannabidiol (CBD) – 47% of patients use daily

Women drive this usage trend – indexing 50% higher for CBD usage than men

Cannabidiol is the non-psychoactive cannabinoid derived from cannabis and industrial hemp. Commonly known benefits of CBD include a reduction in pain, anxiety, inflammation, and nausea. CBD products derived from cannabis are available in medical and adult use markets, and CBD from industrial hemp is increasingly available to general market consumers.



CBD not only demonstrates medical efficacy across a variety of symptoms and conditions, but has rapidly expanded to consumer markets within the infused food and beverage segment. Similar to the \$35 Billion probiotics global market⁷ dominated by food and beverage products, patients and consumers use a variety of product forms to gain medical and health benefits. Across Michigan, Colorado and Illinois, over 40% are consuming CBD within pill, tincture, or edible form. Is cannabidiol the next probiotics market?

Across total respondents, 47% use cannabis derived CBD daily and women drive this usage trend – 75% of women use CBD. This group of patients identified their preferred cannabis derived CBD products across the Illinois market, and daily dosing level by product type. Aclara Research * 10



Research Findings: 49% of patients earn less than \$40,000 AND spend more than \$3000 on medical cannabis

Illinois cannabis industry regulations are restrictive, but facilitate the production of high quality cannabis without pesticides. Prices maybe as high as \$480 per ounce (equivalent to 28 grams) of cannabis flower - and based on previous Adara Research studies, the average patient uses 2 grams of cannabis flower daily. Price of medical cannabis may be driven by the relatively low patient count of 18,000 in Illinois. In comparison, the medical cannabis program in the neighboring state of Michigan serves over 218,000 patients,⁷ where 47% of patients **spend less than \$1200 per year to gain relief from their medical condition.**⁸

The implications to medical and prescription drug insurers are significant. Patients that experience chronic pain symptoms - the largest group of patients in the health care system – have exhausted prescription drug options within the health care system and are now paying out of pocket to gain relief. The question emerges:

Could medical cannabis increase patient well being metrics, and decrease the annual cost to serve chronic pain patients – the largest group of patients in America? Households earning less than \$40,000 are spending more than 8% of pre-tax income on medical cannabis products. That's almost half of the total food spending for the average US household (\$7,023 annually)⁴



Aclara Research ***** 11

Health Care and Market Implications



Health Care Implications

Women's Health Care, Government Spending and Market Expansion: Addressing autoimmune diseases and the impact on women has a cumulative economic impact of more than \$300 Million



Improve women's health care outcomes and expand the market by \$130 Million

Auto-immune diseases are a women's health care issue – impacting 50 Million adults of which 75% are women.* Previous research studies indicate that women's health care needs are not being met within the health care system – and most women are not aware of higher perceived efficacy of fellow patients with similar conditions.

Cannabis continues to show efficacy in treating autoimmune diseases² and improving patient outcomes. If 10% of Illinois residents with Fibromyalgia, IBS, Crohn's and Sjogren's found relief with cannabis, the industry could expand by \$130Million annually.**



Responsibly decrease usage of prescription drugs and save Medicaid \$180 Million

Researchers at the University of Georgia identified a \$1B- \$3.8Billion savings to the Medicaid program within states that offer access to medical cannabis - driven by decline in prescription drug usage.

Aclara Research results indicate 33% of respondents stopped using Rx drugs after using medical cannabis. Applying these results to state Medicaid participants would result in a \$180Million annual savings to Medicaid prescription drug costs.



*American AutoImmune Related Disease Association

**Market opportunity contingent on conversion rates of eligible users within Illinois (5%-20)

Aclara Research ***** 13

Retailer Implications: Loyalty and Assortment



Differentiation and Loyalty: Invest in patient care and education at the dispensary

26% of female patients are completely new to cannabis usage. Retailers must have knowledgeable staff to help patients make effective health care decisions and increase customer loyalty.

State restrictions limit patients to shop at one dispensary – and require pre-registration with the state to change the store of record. Despite this limitation, patients are shopping multiple outlets - over 40% of patients have shopped at more than one dispensary. Ensure that your distribution, pricing and promotion exceeds patient expectations - before regulations allow multi-outlet shopping.



Evaluate inventory assortment within a patient need states framework

Patients select products to find relief from specific symptoms, or need states.

Leverage de-identified customer data to create a customer segmentation - and find the leading cannabis products across these segments. Refine your assortment to meet these needs - and maintain in stock position of the products that matter most to your patient base.





Manufacturer Implications: Product Development



Cannabidiol (CBD) – the next functional food ingredient

CBD is sourced from cannabis and industrial hemp. While most users prefer whole plant oil extracts from cannabis, an increasing number of consumers are selecting hemp based CBD products where cannabis derived products are unavailable.

Health professionals and academic researchers have increased focus on this non-intoxicating compound of the cannabis plant to treat many auto-immune conditions. Similar to the \$35 billion probiotics market, CBD could be the next 'food as medicine'.



Customer centric product innovation – understand the patient need state, and how well your product gets the job done

There are 5 key symptoms that drive the medical cannabis usage occasion, and patient product selection.

Evaluate market product assortment and performance – within a patient centric segmentation framework. Identify which patient 'jobs' are NOT being done across the market– and leverage these insights to drive product innovation strategy that improve patient outcomes and market performance.





About Aclara Research: Insight to Action



About Aclara Research

Aclara Research is a team of professionals linking healthcare research with cannabis insights to solve commercial challenges. Our background across the leading consumer packaged goods companies spans sales, product innovation, in store experience, marketing, consumer insights and analytics.

We help our clients within the cannabis industry understand patient and consumer needs – how to assess market opportunities, prioritize product development and differentiate products that benefit patients and consumers.

Our cannabis patient and consumer research panel offers real time access to customer insights across legal markets. Our quantitative and qualitative research are the foundation of a customer centric innovation strategy - market development, product innovation and improved health care outcomes.



Insight to Action

The Aclara Research team knows that insight without action is overhead. We uncover key insights – and then develop implementation plans to test strategy and commercial impact. Market differentiation and awareness increase business value.

Our focus on the patient experience across medical markets allows comparison across key metrics. Contact Aclara Research to learn how our insights can illuminate market opportunities.

To review the full Illinois Patient Experience Study and learn more about Aclara Research, contact <u>sales@aclararesearch.com</u>





Sources

- 1. The Economic Costs of Pain in the United States, Darrell J. Gaskin, Patrick Richard. The Journal of Pain, 2012
- 2. Marijuana shows potential in treating autoimmune disease, Nagarkatti, Nagarkatti and Yang, Journal of Biological Chemistry, June 2014
- 3. F2015 Total Medicaid Spending, The Henry Kaiser Family Foundation, Total US and State
- 4. Bureau of Labor Statistics, Consumer Expenditures 2015: Food at Home and Food Away from Home
- 5. The Gender Gap in Pain, Laurie Edwards, The New York Times, May 6, 2013
- 6. A Nation in Pain, Express Scripts, December 2014
- 7. Probiotics Market Analysis By Application and By End-Use (Human Probiotics, Animal Probiotics) And Segment Forecast To 2024, Grandview Research, September 2016
- 8. Medical Cannabis and Chronic Pain in Michigan, Aclara Research, May 2016
- **9. Medical Marijuana Laws Associated with Decline in Medicaid Prescriptions**, Bradford and Bradford, *Health Affairs*, April 2017
- 10. United States Center for Disease Control
- 11. National Institute for Mental Health
- 12. Department of Health and Human Services
- 13. American Academy of Pain Medicine



