CBD/Cannabis
Adult Consumer Attitudes and Usage

Presented by:
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Senior Vice President

Management Science Associates, Inc.
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AGENDA

• Google Search Trends

• CBD/Cannabis Attitude and Usage Study
  • Attitudes
  • Uses
  • Profiles – Approve/Disapprove
  • Trends by State Legal Status
  • Legal/Not Legal Market Comparison

• Performance by Category and Items
Google Search Trends

Google Trend Data as April 3, 2019

- Cigarettes
- Chew + Tobacco
- Cigars
- Vape + Vapor + e-Cig + JUUL
- CBD
CBD/Cannabis Attitude and Usage Study
Market Survey Background

• Balanced survey of over 70,000 legal adults across 69 markets with multiple waves.

Akron, OH  Columbus, OH  Madison, WI  Reno, NV
Albany, NY  Dallas-Ft. Worth, TX  Melbourne, FL  Richmond, VA
Allentown-Bethlehem, PA  Dayton, OH  Miami, FL  Rockford, IL
Atlanta, GA  Denver, CO  Milwaukee, WI  Sacramento, CA
Austin, TX  Des Moines, IA  Minneapolis-St. Paul, MN  Salt Lake City, UT
Baltimore, MD  Detroit, MI  Nashville, TN  San Antonio, TX
Birmingham, AL  Ft. Myers-Naples, FL  New Orleans, LA  San Diego, CA
Boise, ID  Greensboro, NC  New York, NY  Seattle, WA
Boston, MA  Harrisburg-Lancaster-Lebanon-York, PA  Norfolk, VA  Southern NH
Buffalo, NY  Houston, TX  Ocala, FL  Spokane, WA
Canton, OH  Indianapolis, IN  Omaha, NE  Syracuse, NY
Charleston, SC  Jacksonville, FL  Orlando, FL  Tampa-St. Petersburg, FL
Chicago, IL  Las Vegas, NV  Philadelphia, PA  Toledo, OH
Cincinnati, OH  Lexington, KY  Phoenix, AZ  Utica-Rome, NY
Cleveland, OH  Little Rock, AR  Pittsburgh, PA  Washington, DC
Colorado Springs, CO  Los Angeles, CA  Portland, OR  West Palm Beach, FL
Columbia-Jefferson City, MO  Louisville, KY  Providence, RI  Yakima, WA

Source: RAC Survey Data
National Survey

- Most adults (66.5%) approve either or both uses of Cannabis
- Almost 21% still have no opinion, where 12.6% disapprove of any legalization

National Opinion of Cannabis/Marijuana

39% of responders have tried cannabis
80% of responders who tried are likely to use cannabis within the next year

Source: RAC Survey Data
National Survey

- 86% of respondents who have tried cannabis approve both recreational and/or medicinal cannabis

Opinion of Those Who Have Tried Cannabis

Source: RAC Survey Data
National Survey

Very/Extremely Likely to Use Either Next Year

Source: RAC Survey Data
Why Use CBD/Cannabis?

• Most of the top 5 important reasons for use are closer to medicinal than recreational

Top 5 Important Reasons for Use

- Help Sleep
- Treat Temporary/Minor Pain
- Treat Chronic/Recurring Pain
- Form Of Relaxation When Alone
- Help Depression, Anxiety, Stress & Other Mental Health Issues

Indexed to average of % respondents answering important

Source: RAC Survey Data
Why Not Use CBD/Cannabis?

• 35% or more of the respondents would not like the side effect or fear mental and physical harm

Why not use cannabis?

Source: RAC Survey Data
Cannabis Usage Type

- Smoking cannabis is the most popular form of usage, followed by Edibles and CBD.

Source: RAC Survey Data
# National Demographic Profile Index

<table>
<thead>
<tr>
<th>Category</th>
<th>Approve</th>
<th>Disapprove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender/Age</td>
<td>Males 18-49, Females 18-34</td>
<td>Males &amp; Female 50+</td>
</tr>
<tr>
<td>Employment</td>
<td>Blue Collar, Unemployed, Student</td>
<td>Retired</td>
</tr>
<tr>
<td>Income</td>
<td>$50,000+ (18-34)</td>
<td>$50,000+ (50+)</td>
</tr>
</tbody>
</table>

Source: RAC Survey Data from 45 surveys conducted in 2018
Target Shopper Profile

Younger shoppers, predominately single and childless. Renters, likely owns a pet and is politically liberal.

Spends 3+ hours online daily, preferring online sources for music, movies, and news.

Enjoys activities with thrill or risk, such as snowboarding and gambling.
Unlikely Shopper Profile

Usually 50 or older, retired, married or widowed. They have owned their home for 20+ years, have an empty nest, regularly attend religious services and are politically conservative.

Spend less than 60 minutes a day online, preferring cable TV for entertainment and print news.

Enjoys leisure activities, such as cruising and golf. Resistant to cannabis because of fear of harm or disapproval.
Cannabis Trends by State Legal Status
Cannabis Trends by State Legal Status

- Analysis for this section is based on 45 surveys across 39 cities and 26 states, conducted in 2018.

<table>
<thead>
<tr>
<th>Fully Legal</th>
<th>Medical Legal</th>
<th>Illegal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8 States</strong></td>
<td><strong>12 States</strong></td>
<td><strong>6 States</strong></td>
</tr>
<tr>
<td>CA</td>
<td>Sacramento, CA</td>
<td>GA</td>
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<td>CO</td>
<td>Denver, CO</td>
<td>ID</td>
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<tr>
<td>DC</td>
<td>Washington, DC</td>
<td>KY</td>
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<td>MA</td>
<td>Boston, MA</td>
<td>TX</td>
</tr>
<tr>
<td>MI</td>
<td>Detroit, MI</td>
<td>TX</td>
</tr>
<tr>
<td>NV</td>
<td>Las Vegas, NV</td>
<td>TX</td>
</tr>
<tr>
<td>NV</td>
<td>Reno, NV</td>
<td>VA</td>
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<tr>
<td>OR</td>
<td>Portland, OR</td>
<td>WI</td>
</tr>
<tr>
<td>WA</td>
<td>Seattle, WA</td>
<td>WI</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>20 Cities</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>AZ</td>
<td>Phoenix, AZ</td>
<td></td>
</tr>
<tr>
<td>FL</td>
<td>Ft. Myers-Naples, FL</td>
<td>FL</td>
</tr>
<tr>
<td>FL</td>
<td>Melbourne, FL</td>
<td>FL</td>
</tr>
<tr>
<td>FL</td>
<td>Orlando, FL</td>
<td>IL</td>
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<tr>
<td>LA</td>
<td>New Orleans, LA</td>
<td>MN</td>
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<tr>
<td>MD</td>
<td>Baltimore, MD</td>
<td>MO</td>
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<tr>
<td>NH</td>
<td>Southern New Hampshire</td>
<td>NY</td>
</tr>
<tr>
<td>OH</td>
<td>Akron, OH</td>
<td>OH</td>
</tr>
<tr>
<td>OH</td>
<td>Cincinnati, OH</td>
<td>OH</td>
</tr>
<tr>
<td>OH</td>
<td>Toledo, OH</td>
<td>PA</td>
</tr>
<tr>
<td>UT</td>
<td>Salt Lake City, UT</td>
<td></td>
</tr>
</tbody>
</table>

Source: RAC Survey Data from 45 surveys conducted in 2018
Cannabis Usage by State Legal Status

- Cannabis usage rates are over 10 points higher in fully legal states.

% of People by Cannabis Usage Type and State Legal Status

- Fully Legal: 46% Have Tried, 28% Past Year Used, 21% Currently Use
- Medical Legal: 33% Have Tried, 17% Past Year Used, 12% Currently Use
- Illegal: 31% Have Tried, 17% Past Year Used, 11% Currently Use
- Total: 36% Have Tried, 20% Past Year Used, 14% Currently Use

Source: RAC Survey
Data from 45 surveys conducted in 2018
Cannabis Usage Type

- Smoking cannabis is the most popular form of usage across all state legalities.
- More discrete forms are relatively more popular in states without recreational legal status.

% of People who Purchase Cannabis Form

Source: RAC Survey
Data from 45 surveys conducted in 2018
Legal/Not Legal Market Comparison
Reasons to Purchase CBD/Cannabis

• What are the most/least influential reasons to purchase recreational CBD/Cannabis?

The top influence nationally was to treat pain, but that was the second most influential reason in Denver and Pittsburgh.

<table>
<thead>
<tr>
<th>Influence Recreational Purchase</th>
<th>National</th>
<th>Denver</th>
<th>Pittsburgh</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat Pain</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Help Depression &amp; Other Mental Health</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Help Sleep</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Bottom 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance spiritual experience</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Socialize with new people</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overcome addictions</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: RAC Survey Data from 45 surveys conducted in 2018
CBD/Cannabis Usage Type

- Smoking cannabis is the most popular form of usage in both Denver and Pittsburgh.
- More discrete forms are relatively more popular in Pittsburgh, which doesn’t have recreational legal status.

% of People who have Tried Cannabis who Purchase Cannabis Form

Source: RAC Survey Data from Denver and Pittsburgh surveys conducted in 2018
CBD Usage by Category and Items
Top CBD Categories

- Health & Beauty is the top CBD category in terms of sales dollars and units
- CBD/Pod Vapor is also a significant category with 16% dollar share

<table>
<thead>
<tr>
<th>Category</th>
<th>Dollar Share</th>
<th>Unit Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Beauty</td>
<td>75.5%</td>
<td>68.4%</td>
</tr>
<tr>
<td>CBD Pod/Vapor</td>
<td>16.0%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Packaged Beverages</td>
<td>2.8%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Non-Edible Grocery</td>
<td>0.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>All Other</td>
<td>1.4%</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

Top CBD Sub-Categories

- Other OTC Medications is the leading CBD Sub-Category in terms of dollars and units
- The Vaping Sub-Category is also significant by making up 15.6% of all sales dollars

**Graph:**

- **Other OTC Medications:**
  - Dollar Share: 68.2%
  - Unit Share: 60.1%
- **Vaping:**
  - Dollar Share: 15.6%
  - Unit Share: 9.5%
- **Vitamins/Supplements:**
  - Dollar Share: 3.5%
  - Unit Share: 5.2%
- **Liquid Supplements & Energy Shots:**
  - Dollar Share: 3.3%
  - Unit Share: 3.9%
- **Energy Drinks:**
  - Dollar Share: 2.5%
  - Unit Share: 3.6%
- **Bottled Water:**
  - Dollar Share: 1.4%
  - Unit Share: 5.1%
- **Other HBC:**
  - Dollar Share: 1.2%
  - Unit Share: 3.0%
- **Pet Care:**
  - Dollar Share: 0.8%
  - Unit Share: 0.2%
- **All Other:**
  - Dollar Share: 0.8%
  - Unit Share: 0.6%
  - Dollar Share: 2.6%
  - Unit Share: 8.7%

**Source:** Distributor Shipment to Retail data - 3/17/2018 - 3/9/2019
Top CBD Types

- Gummies, oils and vape contribute over 70% of the dollar share.

Top CBD Types

• Gummies dollar share trend continues to grow

Source: Distributor Shipment to Retail data - 1/6/2018 - 3/16/2019
CBD Dollar Trend

Dollar Trend

Source: Distributor Shipment to Retail data - 1/6/2018 - 3/16/2019
CBD Number of SKUs Trend

#SKU's Trend (Cume)

Source: Distributor Shipment to Retail data - 1/6/2018 - 3/16/2019
Dollars per CBD SKU

Dollars per SKU Trend

Source: Distributor Shipment to Retail data - 1/6/2018 - 3/16/2019
Top CBD Manufacturers

Key Findings

Finding 1
Growth in Google searches and consumer attitudes suggest robust consumer interest to purchase CBD/Cannabis items

Finding 2
Overall, approval of CBD/Cannabis is high, and particularly among those that have tried it

Finding 3
Most consumers purchase a CBD/Cannabis item for medicinal/health reasons

Finding 4
Edibles are second most popular form of usage
THANK YOU