Legal Marijuana:
Medicine, Recreation or Plant?

Larry Wolk, MD MSPH
Executive Director and CMO
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CDPHE Role

• Medical Marijuana Registry
• Medical Marijuana Research
• Retail Marijuana Education
• Marijuana Surveillance
• Laboratory Certification
Medical Marijuana Registry
Medical Marijuana Registry Role

- Issue Medical Marijuana Registry cards
- Maintain database of registered patients
- Review petitions for adding debilitating medical conditions to the medical use of marijuana regulations
- Administer grant programs for clinical and observational research related to potential therapeutic uses of marijuana
The Registration Process

**Step 1:**
Patient is examined by a Colorado licensed M.D. or D.O. in good standing. After examination, physician completes “Physician Certification Form” with plant/oz recommendation.

**Step 2:**
Patient completes the application for registration card and signs it in front of a notary. Caregiver acknowledgement completed, if one is designated.

**Step 3:**
Submit application by certified mail for proof of mailing.

**Step 4:**
Paperwork is evaluated.

**Complete App Includes:**
- Application
- Physician certification dated within 60 days.
- $15 application fee or fee waiver.
- Copy of valid CO ID or waiver documentation

**Step 5:**
All funds received by the Registry are nonrefundable. Check or money order are made payable to CDPHE. **Cash is not advised.** Credit cards are not accepted at this time.

**Step 6:**
Cards are printed once an application is approved and payment has been processed. Cards are mailed standard first class mail to the address on the application.

**Processing Time:**
Patients are encouraged to allow 45 - 60 days for the entire process, including physician exam. It takes no longer than 35 days for an application to be processed once received.
Current Registry Statistics As of June 2015

- **301,677** total patients have applied for a registration card since 2001
- **113,585** active patients are currently on the Registry
- **1,579** physicians have recommended medical marijuana since 2001
- **800** physicians have recommended medical marijuana to one or more patients in the last year
- **16.4%** of active patients have an increased plant count

*Note: Statistics change frequently based upon patient change requests and are updated on our website on a monthly basis.*

Current Registry Statistics As of June 2015

• 32,049 active patients have designated a medical marijuana center

• 4,609 active patients have designated a caregiver

• 6,523 active patients have an increased plant count AND have designated a caregiver or medical marijuana center

• The Registry currently has 22 FTE

• The Registry processes an average of 15,000 pieces of mail per month

Note: Statistics change frequently based upon patient change requests and are updated on our [website](https://www.colorado.gov/pacific/cdphe/statistics-and-data) on a monthly basis.
Medical Marijuana Research
Summary of Evidence re: Medical Benefits

• Cannabis has some fairly well documented medical benefits:
  ✓ Chronic neuropathic pain
  ✓ Multiple sclerosis
  ✓ Chemotherapy induced nausea & vomiting
  ✓ Wasting syndrome (cachexia) with AIDS

• Clear need for clinical trials for most of the conditions for which cannabis already officially “accepted” as effective, as well as for many other conditions of interest:
  ✓ PTSD
  ✓ Epilepsy
  ✓ Inflammatory bowel disease
  ✓ Cancer
  ✓ Other neurologic and psychiatric conditions
  ✓ Opiate dependence and withdrawal
Medical Marijuana Research Grant Program

• Senate Bill 14-155, “Concerning Grant Funding for Medical Marijuana Health Effects Studies”

• Legislative Intent: “… that the Department gather objective scientific research regarding the efficacy of administering marijuana and its component parts as part of medical treatment.”

• “The grant program shall fund observational trials and clinical trials.”

• “In order to ensure objectivity in evaluating research proposals, the grant program shall establish a scientific advisory council.”

• $10 million over 5 years from medical marijuana cash fund
Grants Approved by Board of Health

1. **Observational** study of MJ for IBD in adolescents/young adults
2. **Observational** study of MJ for PTSD
3. **Observational** pharmacokinetic study of high CBD oils for pediatric epilepsy
4. **Observational** study of high CBD oils for pediatric epilepsy
5. **Observational** study of quality of life from using MJ in children with CNS tumors
6. **Observational** study of MJ for sleep disorders

7. **RCT** of MJ (4 potencies THC & CBD) for PTSD in veterans
8. **RCT** of CBD for tremor in Parkinson’s Disease
9. **RCT** of MJ versus oxycodone for chronic spine pain
Retail Marijuana Education
Retail Marijuana Prevention and Education Campaign (SB 14-215)

Ensure that all Colorado residents and visitors understand the parameters of safe, legal and responsible use of retail marijuana.
Prevention and Education Campaign (SB 14-215)

1. 18-month campaign: health effects of marijuana & parameters of legal use

www.GoodToKnowColorado.com
Prevention and Education Campaign
(SB 14-215)

2. Ongoing education and prevention campaign:
   • Retailer (tourists at point of sale)
   • Latino/Hispanic Audience
   • Youth Prevention
   • Fact Sheets
Prevention and Education Campaign (SB 14-215)

3. Maintenance of website portal: colorado.gov/marijuana

4. Alignment of messaging across state agencies
   - Addressing agency concerns
   - Partnering with other state agencies to provide resources and training to complement prevention work
5. Evaluation of the campaigns

- Baseline statewide, targeted-population surveys complete
- Follow-up statewide survey following Good to Know campaign currently in the field
- Annual assessments each year to monitor change
- Will review data from other sources to monitor trends
Monitoring Potential Health Effects and Changes in Use Patterns
Surveillance Role

SB 13-283

“Monitor changes in drug use patterns, broken down by county and race and ethnicity, and the emerging science and medical information relevant to the health effects associated with marijuana use.”
Retail Marijuana Public Health Advisory Committee (SB 13-283)

The Department shall appoint a panel of health care professionals with expertise in cannabinoid physiology to monitor the relevant information. The panel shall:

- Provide a report by 1/31/15 and every 2 years thereafter
- Establish criteria for 1) studies to be reviewed, and 2) reviewing studies and other data, and
- Make recommendations, as appropriate, for policies intended to protect consumers of marijuana or marijuana products and the general public.
Duties of Advisory Committee

- Systematically review the scientific literature
  - Come to consensus on population health effects of marijuana use

- Develop public health statements
  - Come to consensus on translation of the science into simplified language

- Recommend public health related policies

- Recommend public health surveillance activities

- Identify research gaps important to public health
## Marijuana Use Among Adolescents

<table>
<thead>
<tr>
<th>Substantial</th>
<th>Moderate</th>
<th>Limited</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other illicit drug use and addiction after adolescence</td>
<td>Impaired cognitive abilities and academic performance after 28 days abstinence</td>
<td>Lower IQ after short abstinence</td>
<td>Anxiety after adolescence</td>
</tr>
<tr>
<td>Psychotic symptoms or disorders like schizophrenia</td>
<td>Less high school graduation</td>
<td>Less likely to earn college degree</td>
<td>Depression after adolescence</td>
</tr>
<tr>
<td>Increased MJ use and addiction after adolescence</td>
<td></td>
<td></td>
<td>Suicidal thoughts or attempts</td>
</tr>
<tr>
<td>Alcohol or tobacco use and addiction after adolescence</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Quitting lowers risk of cognitive and mental health effects</td>
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</tbody>
</table>
## Surveillance Activities

<table>
<thead>
<tr>
<th>Target Pop.</th>
<th>Problem</th>
<th>Monitoring</th>
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<tbody>
<tr>
<td>Young Children</td>
<td>Accidental Poisoning</td>
<td>UC/Childrens Research Project Colorado Hospital Association (CHA) Data</td>
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<tr>
<td></td>
<td></td>
<td>Rocky Mountain Poison and Drug Center Calls</td>
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<tr>
<td></td>
<td></td>
<td>Child Health Survey(CHS) - risk factors</td>
</tr>
<tr>
<td>Youth</td>
<td>Increased Use/Abuse</td>
<td>Healthy Kids Colorado Survey (aka YRBS)</td>
</tr>
<tr>
<td></td>
<td>Poisoning, Overdose, Abuse</td>
<td>Colorado Hospitalization Data</td>
</tr>
<tr>
<td></td>
<td>Accidents/Trauma</td>
<td>Rocky Mountain Poison and Drug Center Calls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Colorado Hospitalization Data</td>
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<tr>
<td></td>
<td></td>
<td>Colorado Trauma Registry</td>
</tr>
<tr>
<td>Adults</td>
<td>Increased Use/Abuse</td>
<td>Behavioral Risk Factor Surveillance System (BRFSS)</td>
</tr>
<tr>
<td></td>
<td>Poisoning, Overdose, Abuse</td>
<td>Influential Factors for Healthy Living Survey (TABS)</td>
</tr>
<tr>
<td></td>
<td>Accidents/Trauma</td>
<td>Colorado Hospitalization Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rocky Mountain Poison and Drug Center Calls</td>
</tr>
<tr>
<td></td>
<td>Contaminated Products</td>
<td>Colorado Hospitalization Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&amp; Trauma Registry</td>
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<tr>
<td></td>
<td></td>
<td>Pilot Surveillance (Ski-Related Injuries)</td>
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<tr>
<td></td>
<td></td>
<td>Food-borne Illness Surveillance related to Edibles</td>
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<tr>
<td></td>
<td></td>
<td>Rocky Mountain Poison and Drug Center Calls</td>
</tr>
<tr>
<td>Pregnant / Breastfeeding</td>
<td>Birth Defects, Developmental Disabilities</td>
<td>Pregnancy Risk Assessment Monitoring System (PRAMS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active Surveillance (Birth Defects Registry)</td>
</tr>
</tbody>
</table>
Past 30 day marijuana use, 18-25 year olds

Source: Substance Abuse and Mental Health Services Administration, *National Survey on Drug Use and Health.*
Colorado High School Students’ Past 30 Day Marijuana Usage

Sources: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey; Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health.

Note: The 2007 HKCS survey did not meet the necessary response rate to be eligible for weighting so it is not presented here.
Emergency room admission rate (per 100,000), by substance

- Alcohol
- Marijuana
- Prescription opioids
- Methamphetamine

Source: Data provided by Colorado Department of Public Health and Environment. Note: Indicates drug's involvement in first three IDC-9 diagnosis codes.
Rates of Hospitalizations (HD) and Emergency Department (ED) Visits with Possible Marijuana Exposures, Diagnoses, or Billing Codes in the First Three Diagnosis Codes per 100,000 HD and ED Visits by Time Period in Colorado.

Prior Legalization of Medical Marijuana

- 2000: \(N = 1,211\)
- 2001-2009: \(N = 12,328\)

Medical Marijuana Legalized

- 2010-2013: \(N = 16,428\)
- Jan-Jun 2014: \(N = 5,014\)

Medical Marijuana Commercialized

- 2010-2013: \(N = 7,080\)

Retail Marijuana Legalized

- Jan-Jun 2014: \(N = 1,191\)
Statewide Substance-related Calls to Poison Control

Source: Rocky Mountain Poison and Drug Center.

Note: "Other drugs" includes cocaine/crack, heroin/morphine, and club drugs.
Retail Marijuana Testing Facility Inspection Program
Retail marijuana testing facility inspection program:

• Coordinates inspection of retail marijuana testing facilities;

• Reviews all documentation and practices relating to laboratory methods, staff qualifications, and quality assurance;

• Ensures that testing facilities meet the rules promulgated by the Department of Revenue (DOR) and are competent to carry out specific scientific tests;

• Provides recommendations to DOR about suitability of the testing facilities for certification; and,

• Provides scientific consultation and recommendations to the DOR in regards to laboratory testing as it pertains to public health and safety.
As of May 26, 2015, nineteen Retail Marijuana Testing Facilities have been licensed by DOR.

Eleven of those have been granted provisional certifications.

<table>
<thead>
<tr>
<th>Testing Category</th>
<th>Potency</th>
<th>Microbials (Bacteria, Fungus)</th>
<th>Residual Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Labs Currently Certified</td>
<td>10</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

*Inspections are ongoing
Marijuana Offenses, by Month and Legal Status

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data.
Marijuana Offenses in Colorado, by School Status

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data.
Note: In 2012, there were 43 cases where the type of school could not be determined.
Driving Under the Influence

Note: Citation type is classified according to the trooper’s impressions of the reason for impairment. Total Marijuana citations include marijuana alone, marijuana plus alcohol, and marijuana plus other drugs.

Source: Data provided by Colorado State Patrol, 7/9/2015.
Traffic Fatalities

Source: Colorado Department of Transportation, Fatality Analysis Reporting System (FARS) data.

Traffic Fatalities

Source: Colorado Department of Transportation, Fatality Analysis Reporting System (FARS) data.
### Total suspensions and drug suspensions per 100,000 students

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Suspensions</th>
<th>Drug Suspensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>13,445</td>
<td>443</td>
</tr>
<tr>
<td>2005-2006</td>
<td>13,267</td>
<td>437</td>
</tr>
<tr>
<td>2006-2007</td>
<td>13,618</td>
<td>414</td>
</tr>
<tr>
<td>2007-2008</td>
<td>12,796</td>
<td>400</td>
</tr>
<tr>
<td>2008-2009</td>
<td>12,632</td>
<td>391</td>
</tr>
<tr>
<td>2009-2010</td>
<td>11,542</td>
<td>506</td>
</tr>
<tr>
<td>2010-2011</td>
<td>11,094</td>
<td>551</td>
</tr>
<tr>
<td>2011-2012</td>
<td>10,454</td>
<td>534</td>
</tr>
<tr>
<td>2012-2013</td>
<td>9,301</td>
<td>500</td>
</tr>
<tr>
<td>2013-2014</td>
<td>8,396</td>
<td>538</td>
</tr>
</tbody>
</table>

Source: Colorado Department of Education.
Questions?