



COLORADO

**Department of Public
Health & Environment**

Retail Marijuana Education Program

2014 Legislative Report

Submitted on March 1, 2015
to the Colorado General Assembly
by the Prevention Services Division
Activities: July 1, 2014 - January 31, 2015

Document Information

Title	Colorado Department of Public Health and Environment Retail Marijuana Education Program Report for the General Assembly
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Subject	Report on the Retail Marijuana Education Program activities, including the reach and effectiveness of public awareness and education campaign efforts in Colorado from July 1, 2014 to January 31, 2015
Statute	C.R.S. § 25-3.5-1007(2) (Senate Bill 14-215) on the activities required in C.R.S. § 25-3.5-1001 through C.R.S. § 25-3.5-1007
Date	March 1, 2015

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Report to the Legislature Concerning the Retail Marijuana Education Program

This report, developed by the Prevention Services Division, outlines the activities pursuant to Colorado Revised Statute § 25-3.5-1001 through 25-3.5-1007 to provide education, public awareness and prevention messages for retail marijuana. This report identifies the specific responsibilities of the department and outlines the initial progress made to ensure all Colorado residents and visitors understand the parameters of safe, legal and responsible use of retail marijuana.

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Executive Summary

Pursuant to Colorado Revised Statutes 25-3.5-1001 through 1007, the Colorado Department of Public Health and Environment (CDPHE) is funded to provide education, public awareness and prevention messages for retail marijuana. CDPHE is charged with creating statewide campaigns to educate Colorado residents and visitors about the parameters of safe, legal and responsible use of retail marijuana. The following describes CDPHE's progress from July 1, 2014 through January 31, 2015, to implement the education and prevention activities outlined in statute. Additionally, this report provides an overview of how CDPHE is collaborating across state agencies and with local communities to integrate campaign messaging statewide. CDPHE will share more information and campaign evaluation results in the November 1, 2015, report due to the General Assembly as required under C.R.S. § 25-3.5-1007.

Campaigns

The CDPHE Retail Marijuana Education Program contracted with a media agency through a competitive request for proposal process and successfully launched a public awareness and education campaign on January 5, 2015 called [Good to Know](#). CDPHE and the selected media contractor, Cactus, included messages to prevent high-risk behaviors in the *Good to Know* campaign, such as information on the risks to youth brain development, the risks of over-consuming edibles and the importance of safe storage to prevent unintentional ingestions.

Currently, CDPHE is working with Cactus to provide point-of-sale materials to retailers using the *Good To Know* platform and to develop a culturally relevant Spanish-language campaign. CDPHE and Cactus are conducting research to develop on-going public awareness campaigns to address youth prevention and preventing use of marijuana during pregnancy or while breastfeeding. CDPHE will continue to monitor data and research from the Retail Marijuana Public Health Advisory Committee to identify emerging high-risk groups and accurate health messaging.¹

Website

During the 2015 fiscal year, CDPHE created, promoted and maintained the Colorado.gov/marijuana web portal as the primary resource for all Colorado residents and visitors to learn more about the laws and health impacts of retail marijuana in the state. Recent updates to the web portal include translation of content into Spanish, updating information on the health effects of marijuana to align with the Retail Marijuana Public Health Advisory Committee research statements, the addition of new factsheets and a form for community agencies to request resources, training or other support.¹

Evaluation

CDPHE contracted with the Colorado School of Public Health (CSPH) to evaluate the effectiveness of these public awareness efforts. CSPH completed a 36-month evaluation plan outlining methodology to evaluate the relationship between campaign exposure and subsequent changes to reported knowledge of laws, awareness of health effects and perceptions of risk of certain behaviors. CSPH administered a survey with a sample of Colorado residents to gather a baseline of knowledge, awareness, perceptions and behaviors. CSPH will re-administer this survey to monitor changes over

time and to determine whether exposure to CDPHE campaigns and materials contributed to those changes. CSPH is in the process of analyzing the baseline data. All evaluation results will be included in the November 1, 2015, report to the General Assembly.

[Additional Activities of the Retail Marijuana Education Program](#)

In addition to the website and campaigns, CDPHE drafted resources to prevent youth access and exposure to marijuana, including clinical prevention guidelines for health care providers and educational fact sheets for parents and professionals who work with youth. Additionally, CDPHE created a guide for local level regulations with a focus on aligning regulations with researched and effective policies that prevent youth access to other substances. This guide was designed to support local governments as they considered local level implementation of retail marijuana.

CDPHE staff collaborated across state agencies to align messaging on retail marijuana with the statements of the health effects from the Retail Marijuana Public Health Advisory Committee and the *Good to Know* campaign. Additionally, CDPHE will deliver training sessions on healthy youth development throughout spring 2015. CDPHE is providing support about retail marijuana education, youth prevention strategies and materials to state and community agencies, especially those working with youth or other high-risk groups. CSPH will evaluate the impact of collaboration, message integration, training sessions and resource dissemination efforts at the state and local level.

Introduction

Pursuant to Colorado Revised Statutes (C.R.S.) § 25-3.5-1001 through 1007, the Colorado Department of Public Health and Environment (CDPHE) is funded to provide education, public awareness and prevention messages for retail marijuana. CDPHE is charged with creating statewide campaigns to educate Colorado residents and visitors about the parameters of safe, legal and responsible use of retail marijuana. This report describes CDPHE's progress from July 1, 2014 through January 31, 2015, to implement the education and prevention activities outlined in statute. Additionally, this report provides an overview of how CDPHE is collaborating across state agencies and with local communities to integrate campaign messaging statewide. CDPHE will share more information and campaign evaluation results in the November 1, 2015, report due to the General Assembly as required under C.R.S. § 25-3.5-1007. CDPHE's \$5,683,608 appropriation for these efforts includes funding for staff and operating expenses in order to execute the following activities as outlined in statute:

- C.R.S. § 25-3.5-1003: Implement an 18-month public awareness and education campaign directed at educating the public on legal use and the health effects of marijuana, including the development of fact sheets and clinical prevention guidelines for health care providers.
- C.R.S. § 25-3.5-1004: Implement ongoing targeted education and prevention efforts. This includes providing five regional training sessions for local programs addressing marijuana prevention through healthy youth development strategies. It also includes the creation of sub-campaigns to educate and prevent negative health consequences among the following target audiences:
 - General public on legal use and the health effects of marijuana.
 - Retailers on the importance of preventing youth access.
 - High-risk populations.
 - Consumers on the risks of the overconsumption of edibles.
- C.R.S. § 25-3.5-1005: Create a web portal for all state and local agency information on marijuana laws, health effects and resources; promote website to the public: Colorado.gov/marijuana.
- C.R.S. § 25-3.5-1006: Align messaging across state agencies and integrate the messages into local prevention programs. This includes providing data, training, educational materials and resources on effective prevention strategies to local community programs or coalitions addressing marijuana education and/or youth prevention.
- C.R.S. § 25-3.5-1007: Develop and implement three-year evaluation plan on the reach and impact of the campaigns and CDPHE's effectiveness in educating Colorado residents on retail marijuana laws and preventing negative public health consequences. This includes two reports to the General Assembly on the effectiveness of the campaigns.

Guidance for CDPHE's Education Efforts

CDPHE used guidance from a variety of sources to inform and increase the effectiveness of educational and public awareness efforts, including:

- Accurate research on the effects of marijuana.
- Data on statewide marijuana-related concerns.
- Assessments of available marijuana health education messaging.
- Insight of diverse stakeholders from across the state.

To ensure the accuracy of public education on the health effects of marijuana, CDPHE used researched statements provided by the Retail Marijuana Public Health Advisory Committee.¹ This committee of medical and public health experts conducted a systematic literature review of all available research on the health impacts of marijuana and shared these researched statements with the General Assembly on January 30, 2015.

CDPHE used assessment results from multiple state agencies on knowledge, attitudes and behaviors surrounding retail marijuana to inform public education efforts. The departments of Transportation, Education and Human Services and the Governor's Office of Community Partnerships shared results from past surveys to inform CDPHE's education efforts. CDPHE also conducted surveys and focus groups in partnership with the contracted media agency and evaluator to learn more about target audiences. CDPHE's *Good To Know* campaign refers parents to the CDHS Office of Behavioral Health's successful [Speak Now Colorado](#) campaign that educates parents on age-appropriate ways to talk to youth about substance use, specifically alcohol and marijuana.

Finally, CDPHE received insightful feedback from a diverse group of statewide stakeholders to guide the development of campaign messages. Pursuant to Senate Bill 13-283 and Executive Order 2013-007, the Governor's Office convened the Marijuana Education Oversight Committee to serve as the advisory committee to the public education efforts outlined in Senate Bill 14-215, particularly for CDPHE. This group has representation from a wide variety of stakeholders, including: Governor's Office of Marijuana Coordination; Colorado General Assembly; the Colorado Departments of Revenue (DOR), Education (CDE), Human Services (CDHS), Public Health and Environment (CDPHE) and Transportation (CDOT); the marijuana industry; medical marijuana patient advocacy groups; substance abuse prevention; higher education; health care providers; local and state prevention groups; grantees from CDHS' Tony Grampsas Youth Services (TGYS) program or the Office of Behavioral Health (OBH); and local government.

CDPHE's Retail Marijuana Education Program presents all educational activities, such as fact sheet development and campaign creative concepts, to members of the Marijuana Education Oversight Committee for guidance and strategic direction. This committee has contributed valuable insight to the work of the education program and will continue to meet monthly to guide the development of future initiatives.

Effectiveness of CDPHE Retail Marijuana Education Campaigns

Public Awareness and Education Campaign Overview

Colorado Revised Statutes § 25-3.5-1003 through 1005 tasked CDPHE with the launch of an initial public awareness and education campaign and ongoing, education and prevention efforts targeting the following populations:

- General public on legal use and health effects of marijuana.
- Retailers on the importance of preventing youth access.
- High-risk populations to prevent public health concerns.
- Retail marijuana consumers to prevent the overconsumption of edibles.

Statute required that CDPHE launch the initial public awareness and education campaign by January 2015.

Effective substance abuse prevention strategies include media campaigns that align community attitudes about use with the laws governing that use and with accurate information about the substances.² In order to prevent youth access to marijuana, CDPHE focused initial campaign efforts on increasing the knowledge of retail marijuana laws among all Colorado residents and visitors as outlined in statute. Adults who are well informed about the laws are better equipped to prevent inappropriate or unsafe marijuana use and underage access to the substance.

CDPHE released a request for proposals in August 2014, to select a qualified vendor to research, develop, create, test, produce and purchase media for a statewide public awareness and education campaign. A diverse evaluation panel unanimously selected Cactus, a Denver-based, full-service advertising agency, from 14 applicants. CDPHE issued a notification of award and worked with Cactus to develop a contract with a detailed scope of work, deliverables, timeline and budget requirements. CDPHE and Cactus finalized the contract in November 2014.

Message Development Process

Cactus conducted surveys and interviews across the state to gain insight into the perspectives of stakeholders and the public regarding marijuana consumption. Stakeholders and the public responded that Colorado residents, both users and nonusers, needed and wanted more information on the laws and health effects of marijuana. The agency used surveys and interviews with more than 400 stakeholders, 170 members of the public and the Marijuana Education Oversight Committee to develop creative messaging that resonated with the general public while educating them about safe, legal and responsible use of retail marijuana.

Cactus created the *Good To Know* campaign platform to reach and educate all Coloradans age 21 and older, users and non-users alike. While the content of the *Good To Know* campaign is clear and direct in communicating laws and safety guidelines, CDPHE and Cactus wanted to test the delivery of those messages to be sure that all Colorado residents, no matter their opinion on marijuana, found the content approachable and helpful. Cactus administered testing with nearly 450 Colorado residents to gauge their reactions to multiple creative concepts.

The *Good To Know* campaign neither promotes nor negatively judges marijuana use, allowing the message to resonate with a wide variety of individuals holding a wide variety of opinions about legalized marijuana. By providing helpful information about retail marijuana laws and links to more information and resources on health effects, the campaign empowers Colorado residents to discuss what safe, legal and responsible marijuana use means to them.

The *Good To Know* campaign launched on January 5, 2015. Key messages of the campaign include:

- The legal age for retail marijuana purchase, possession and use is 21.
- It is illegal to give or sell retail marijuana to anyone younger than age 21.
- It is illegal to drive while high.
- It is illegal to use marijuana in public, in your car and on federal land.
- It is illegal to take marijuana out of state.
- It is important that anyone with marijuana store it safely to prevent unintentional use.
- It is unsafe for underage youth to use marijuana because their brains are still growing.

The first phase of the campaign included the campaign's microsite, GoodToKnowColorado.com; paid statewide radio advertisements; earned media and Denver metro area print and digital advertising and promotion on social media channels, including Facebook, Twitter and Instagram. The microsite links the public to the Colorado.gov/marijuana web portal, which contains information on the laws and health effects of marijuana use provided by CDPHE and other state agencies. Examples of *Good To Know* campaign creative elements are in Appendix A.

Good To Know Campaign Reach across Colorado and the Nation

Within the first four weeks of the campaign launch, *Good To Know* reached the following numbers of Colorado residents, visitors and interested members of the public nationwide:

- 220 Colorado and national media mentions, which resulted in more than 10,506,000 media impressions (the number of times a consumer sees or hears the message) and added more than \$305,000 in value to the campaign.
- 34,188,000 paid radio impressions.
- 3,000,000 impressions from digital and print advertising with the Denver Post.
- 1,530,000 impressions on social media.
- 41,500 visits (averaging about 2,000 per day) to GoodToKnowColorado.com, mostly referred by social media or the press coverage of the campaign launch.

The Jimmy Kimmel Live television program covered the campaign launch and published the clip on the show's popular Facebook page. As of February 19, 2015, the public viewed the clip more than 4,550,000 times, generating almost 36,000 likes, 6,950 comments and 56,000 shares. The video featuring the *Good To Know* campaign became the second-most-watched Facebook video on the Jimmy Kimmel Live page ever.

CDPHE contracted with the Colorado School of Public Health (CSPH) to evaluate any link between the reach of the campaign and subsequent changes in the knowledge of marijuana laws, awareness of the health effects, perceptions of risk and prevention behaviors among a sample of Colorado residents. Results of this analysis are pending completion of media campaign activities and post-

campaign survey delivery and analysis. CDPHE will report this impact analysis and CSPH's recommendations for future marijuana prevention and evaluation efforts in the November 1, 2015, report to the General Assembly. More information on the evaluation metrics, methodology and analysis is included in Appendix B.

Good To Know Campaign Next Steps

The second phase of the general public campaign will launch in February 2015 and continue into March 2015. This phase will launch with extensive statewide awareness advertising on TV, billboards, transit ads, digital advertising, additional social media engagement, as well as campaign training and materials available for community partners. This phase of the campaign will focus heavily on consumer social engagement to drive ongoing participation.

Cactus is conducting four regional training sessions with community partners throughout the state in February 2015. These sessions will address the research, planning, communications strategy and final creative elements for the *Good To Know* campaign, as well as public relations and social media training for participants. Cactus and CDPHE will distribute recently developed materials on the campaign and assess production needs of local communities.

Spanish-Language, Culturally Relevant Campaign

CDPHE is conducting the research necessary to develop campaign materials to reach Colorado's bilingual and monolingual Latino audiences. CDPHE will rewrite and redesign campaign materials into messages and images that are culturally relevant and resonate with the intended target audience. The Spanish-language campaign will launch in summer 2015.

Retailer Campaign: Point-of-Sale Materials

A robust retailer campaign will launch in March 2015 that targets both the retailers and their customers with information and materials. CDPHE and Cactus met with representatives of the marijuana industry to inform efforts to create materials appropriate at point-of-sale to educate customers about the laws and health effects of retail marijuana use. Materials also will address the prevention of overconsumption of edibles using the research from the Retail Marijuana Public Health Advisory Committee.¹ The committee identified that edible marijuana products may take at least 90 minutes and as long as four hours to reach peak THC (the psychoactive component of marijuana) blood concentrations and more time to feel the full effects.¹ Marijuana users should wait at least that amount of time prior to consuming additional servings or other substances.

Collaboration with retailers helps CDPHE efficiently reach marijuana users who are residents or visitors with information about safe, legal and responsible personal use, including effective ways to prevent youth access to marijuana and to store marijuana products safely. C.R.S. § 25-3.5-1004 identifies retail stores and the overconsumption of edibles as important campaign targets.

Future Prevention Campaigns and On-Going Public Awareness

Identification of High-Risk Populations

CDPHE staff identified pregnant or breastfeeding mothers and youth as the two primary target audiences that are at significant health risk from marijuana use or exposure. The findings of the Retail Marijuana Public Health Advisory Committee support the identification of these two vulnerable populations and also support targeting education and prevention messaging to adolescents and young adults.¹ The findings outlined an increase in reported marijuana-related hospitalizations and emergency department visits, particularly among children and youth.¹ The campaign will continue to highlight the importance of safe storage of marijuana products to prevent unintentional ingestion by children and educate the public on the dangers of over-consumption.

CDPHE will continue to monitor public health trend data and Retail Marijuana Public Health Advisory Committee research statements to identify other populations at higher risk of marijuana abuse or exposure. An example of one such population is youth who identify as gay, lesbian or bisexual (GLB). Marijuana use rates in the past 30 days among GLB youth are more than twice the rate of their heterosexual counterparts.³

Youth Prevention Campaign

CDPHE will learn from, build upon and expand past youth prevention efforts into a statewide youth prevention campaign. The Colorado Department of Human Services shared focus group research with CDPHE showing that positive role models, such as parents, are one of the strongest factors influencing youth use. Conversations with parents that focused on only the negative aspects of marijuana use or were grounded in subjective opinions tended to be ineffective.⁴ These conclusions are supported by health communications research demonstrating that fear-based messages are ineffective at changing substance use among youth.⁵

CDPHE and Cactus will finalize formative research with youth to develop the prevention campaign by March 2015. CDPHE will use the findings from the Retail Marijuana Public Health Advisory Committee to inform any health messages included in the youth prevention campaign.¹ Additionally, the CDPHE will draw on formative research conducted as part of the youth marijuana prevention campaign implemented by CDHS and the Governor's Office of Community Partnership's in 2013 and 2014.

A shortfall between marijuana sales tax revenue appropriated and marijuana sales tax revenue collected delayed the execution of the youth-prevention campaign. More information on this shortfall and the reinstatement of funding through Senate Bill 15-167 can be found in the financial report section. Following reinstatement of these funds, CDPHE and Cactus will develop creative elements, test the concepts with youth, produce campaign materials and launch the purchased media for the youth prevention campaign. The youth campaign will launch in summer 2015.

Prevention Campaign for Pregnant and Breastfeeding Women

Communicating the risk of the potential health effects of marijuana use during pregnancy is a top priority for the prevention campaign. Cactus is exploring existing research, data and resources to confirm findings on which to build a campaign. Additionally, Cactus will conduct research with

physicians and patients and consult with partner organizations to gain a multi-perspective understanding of the challenges and opportunities for communicating with this target audience. CDPHE and Cactus will complete research to generate a media campaign and materials targeting pregnant and breastfeeding women in spring 2015, with the goal of launching the campaign later that summer.

Impaired Driving Campaigns

With the support of the Joint Budget Committee (JBC), CDPHE contracted \$500,000 to CDOT to support public education to prevent marijuana-impaired driving. The revitalization of this CDOT campaign is in the development process as of February 2015, and will be complete by June 30, 2015. CDPHE will work with CDOT to incorporate Retail Marijuana Public Health Advisory Committee research highlighting the risks associated with marijuana-impaired driving and the recommended driving wait times based on method of ingestion.¹ CDPHE has reduced future funding requests by this amount for the next fiscal year because CDOT will submit a separate funding request to the JBC.

Colorado.gov/marijuana Web Portal

To simplify access to reliable information about retail marijuana laws, regulations, health effects and relevant resources, CDPHE created the Colorado.gov/marijuana web portal to act as the single resource for accurate and timely information from each of the state agencies for retail marijuana. The Colorado.gov/marijuana web portal links to relevant information and resources from the departments of Human Services, Transportation, Revenue and Education. During the 2014-15 fiscal year, CDPHE updated the web portal to reflect the following changes:

- Aligned the information with new 2014 marijuana laws and regulations.
- Updated all information on the health effects of marijuana to include evidence-based statements researched by the Retail Marijuana Public Health Advisory Committee.¹
- Updated all links to emerging information from all state agencies.
- Added new fact sheets developed by other state agencies.
- Identified and post online resources for county and municipal marijuana laws.
- Created a community agency page to link local governments, schools, public health and prevention partners with resources that support public education and youth prevention efforts across the state.
- Translated all relevant information and resources professionally into Spanish and post on a newly developed En Español tab. CDPHE will post all translated fact sheets on the web portal in late spring 2015.

CDPHE is working with Cactus to improve the usability, design and messaging of the website and integrate it into the education campaign. CDPHE will continue to update the website with any 2015 changes to marijuana laws and regulations. CDPHE will link to information from local municipalities or counties that have passed additional retail marijuana restrictions and link to every state agency that has relevant marijuana information, including educational efforts and resources created by other state agencies.

[Reach of Colorado.gov/marijuana](http://Colorado.gov/marijuana)

Website analytics from the launch on March 20, 2014 to January 31, 2015:

- 27,870 unique users visited the site and viewed pages in the website more than 106,000 times.
- Average length of time visitors spend on the site is two minutes and 33 seconds, which is considered substantial for government and informational websites.

Since the launch of the *Good To Know* campaign in January 2015, the campaign microsite GoodToKnowColorado.com has become the leading referral source to the Colorado.gov/marijuana website. Other leading referral sources include state agency websites.

Resource and Materials Development

In response to a needs assessment conducted with local public health agencies and prevention programs or coalitions, and with input from other state agencies, CDPHE is in the process of developing the following fact sheets:

- A fact sheet for pregnant or breastfeeding women, including the health effects of marijuana exposure, the importance of safe storage, preventing secondhand marijuana smoke exposure and considerations about drug testing at birth.
- A fact sheet for parents on concerns related to youth prevention, including the laws that restrict youth use, the health effects, the importance of safe storage and preventing secondhand marijuana smoke exposure and tips on talking to youth about marijuana.
- A fact sheet for professionals who work with youth on concerns related to youth prevention, including the laws that restrict youth use, the health effects, evidence-based strategies and tips on talking to youth about marijuana.
- A fact sheet about common marijuana myths.
- A fact sheet on methods of marijuana use and related health concerns.

CDPHE based all information on the health effects of marijuana on the researched statements from the Retail Marijuana Public Health Advisory Committee.¹ The fact sheets will be professionally designed and made available through the Colorado.gov/marijuana website in March 2015. CDPHE will continue to develop additional fact sheets based on requests from local partners throughout spring and summer 2015.

Effective Strategies to Address Risk and Protective Factors that Prevent Youth Use of Marijuana

CDPHE identified effective research-based strategies to reduce risk and increase the protective factors in the lives of youth to prevent use of marijuana. CDPHE identified these strategies in partnership with CDHS, utilizing the National Registry of Evidence-Based Programs and Practices. In addition to the registry, CDPHE and CDHS analyzed more than 50 peer-reviewed articles on evaluated marijuana youth prevention programs and strategies. These strategies can be implemented directly with youth, their families or their communities. CDPHE will integrate information about these strategies into the training, resources and support provided to state and local programs working to prevent marijuana use among youth.

Effectiveness of Campaigns: Overview of the Evaluation Plan

Though CDPHE cannot assess the full effectiveness of campaign efforts until a few months after the launch, this section describes CDPHE's progress to develop and implement a three-year evaluation plan. CDPHE will report on the results of the evaluation in the November 1, 2015 report to the General Assembly per the requirements of C.R.S. § 25-3.5-1007.

Selection of an Evaluation Partner

CDPHE contracted with the Colorado School of Public Health (CSPH) to evaluate the implementation of education and prevention activities (see the three-year evaluation plan attached in Appendix B). CSPH's evaluation team recruited key stakeholders from a variety of state and local agencies, substance abuse prevention professionals, marijuana industry representatives and other community representatives from around the state to serve on the Retail Marijuana Education Campaign Evaluation Advisory Workgroup. This workgroup provides strategic guidance on the evaluation plan, evaluation goals, methodology, evaluation instruments, survey recruitment, data analysis, report distribution and implications of the results for referral to the Marijuana Education Oversight Committee, which advises CDPHE.

Evaluation Goals of the Retail Marijuana Education Program

The primary goal of CSPH's three-year evaluation plan is to assess the effectiveness of CDPHE's retail marijuana education campaigns and website to accomplish the following:

- **Increase accurate knowledge of the retail marijuana laws.** CSPH will measure this change by the percent of correct answers to questions on marijuana laws at baseline and follow-up time point(s) in general and targeted populations (including youth, pregnant and breastfeeding women, clinicians, retailers and users).
- **Increase accurate knowledge of the health impacts of marijuana use.** CSPH will measure this change by the percent of correct answers to questions on marijuana health effects at baseline and follow-up time point(s) in general and targeted populations.
- **Increase perceptions of or negative attitudes toward engaging in problematic use/behaviors associated with marijuana across the state.** CSPH will measure this change by the percent of answers to questions on risks associated with retail marijuana use at baseline and follow-up time point(s) in general and targeted populations, including:
 - Marijuana use during pregnancy or while breastfeeding.
 - Underage use of marijuana.
 - Over-consumption of marijuana-infused products (edibles).
 - Secondhand marijuana smoke exposure.
 - Unsafe storage of marijuana products in the home.
 - Dangerous hash oil extractions.
- **Increase self-reported changes in behaviors related to marijuana exposure prevention.** CSPH will measure this by the change in the percent of respondents who engage in certain behaviors from baseline to follow-up time point(s) in general and targeted populations, including:
 - Clinicians: Increase the percent of clinicians that report using clinical prevention guidelines to counsel patients about marijuana use or exposure during pregnancy or

- breastfeeding, safe storage practices and reducing secondhand marijuana smoke exposure in the home.
- Parents: Increase the proportion of parents that report taking steps to safely store marijuana products in the home or reduce secondhand marijuana smoke exposure in the home.
- **Assess effectiveness of the campaign to reach each target audience and their engagement with campaign messaging.** CSPH will measure this impact using the following indicators:
 - Website analytics, including number of and average length of sessions, total page views, demographic and interest reports, percentage of mobile users, new vs. returning users, social engagement, number of downloads, email sign-ups, number of click-throughs to Colorado.gov/marijuana.
 - Social media engagement (Facebook, Twitter and Instagram), including earned media, engagement growth, followers/fans, retweets/likes, mentions, engagement trends, message sentiment, stakeholder engagement and hashtag trend/performance.
 - Public relations, including a list of outlets reporting on *Good To Know* press event coverage, interviews, articles of note and key takeaways/trends and return on investment of public relations efforts.
 - Radio performance, including the list of markets with CDPHE messaging, key audience demographics, total impressions and frequencies.
 - Additional metrics identified as CDPHE and Cactus incorporate new tactics into the campaign, such as television, billboards, bus ads and high impact digital.
- **Link the recognition, awareness and responses to the following campaigns to changes in the above knowledge, perceptions and behaviors.** CSPH will measure this change by reach indices and scales to document awareness of the following campaigns at baseline and follow-up timepoint(s) and in targeted populations:
 - CDOT “Drive High, Get a DUI” marijuana-impaired driving campaign.
 - Governor’s Office, CDPHE and CBS “Did you Know” campaign promoting Colorado.gov/marijuana.
 - Governor’s Office of Community Partnerships “Don’t Be a Lab Rat” youth prevention.
 - Department of Human Services “Speak Now” parent-focused campaign.
 - Future campaigns released by CDPHE.
 - Other campaigns related to the risks of problematic or illegal marijuana use.

Evaluation efforts will assess the effectiveness of the campaign through examination of the relationship between exposure to campaign elements and changes to reported knowledge of laws, health effects and perceptions of risk of certain behaviors with a snapshot of Colorado residents.

Baseline Assessment of Campaign Effectiveness

Evaluation of CDPHE’s retail marijuana public awareness and education campaigns includes a baseline survey aligned with the goals to measure campaign recognition, knowledge of marijuana health effects and retail marijuana laws, and behaviors. CSPH administered a mixed-mode (mail and telephone) survey with nearly 1,000 Colorado adults aged 20 and older during October-December 2014, in advance of the CDPHE education campaign. The results of this multi-modal survey will establish baseline rates of familiarity of educational campaigns related to marijuana use, awareness

of marijuana laws and attitudes towards and perceptions of risk related to marijuana use. Participants were selected from a general-population survey registry created and maintained by the University of Colorado Cancer Center. The response rate was 70 percent. Data are being prepared for analysis, and complete baseline results will be available in spring 2015.

Additionally, CSPH conducted 500 community-based surveys with youth, pregnant or breastfeeding women, health care providers, retail marijuana users or marijuana industry employees. CSPH is in the process of cleaning and analyzing this data. A full report of the baseline assessment of knowledge, attitudes and behaviors among these target audiences will be available in the spring 2015.

CDPHE and CSPH will complete a follow-up survey to document changes in accurate knowledge of retail marijuana laws and the health impacts of marijuana use, changes in perceptions about problematic use of marijuana and awareness of specific and diverse marijuana campaigns statewide. CDPHE will include baseline and follow-up survey results in the November 1, 2015, report to the General Assembly.

Additional Activities of the Retail Marijuana Education Program

Clinical Prevention Guidelines for Health Care Providers

C.R.S. § 25-3.5-1003 includes the requirement to contract for the creation of clinical guidelines as a resource for health care providers when they recognize that a person is at risk from marijuana use or exposure. Clinical prevention guidelines provide health care providers with research-based recommendations about health-related preventive services such as how to screen for marijuana use in the home, research-based advice to reduce risk and referrals to local resources. CDPHE hired a board-certified physician as a temporary employee to conduct research and solicit input from health care providers to inform the development of clinical prevention guidelines.

Using research from the Retail Marijuana Public Health Advisory Committee, CDPHE identified two priorities for clinical prevention guideline development in this fiscal year: 1) preventing and reducing marijuana use and exposure among pregnant and breastfeeding women (available March 2015); and 2) preventing pediatric exposure to marijuana through safe storage and reducing secondhand smoke in the home (anticipated June, 2015).¹ CDPHE convened a development committee of health care professionals and gathered feedback from more than 350 Colorado public health workers and health care providers. CDPHE created a draft of clinical guidance to prevent marijuana use or exposure during pregnancy or while breastfeeding that will be finalized by March 2015 after pilot testing in area hospitals and incorporating additional health care provider feedback.

Align Messaging Across State and Local Agencies

CDPHE staff has been working across state agencies to align messaging on retail marijuana with the statements of the health effects from the Retail Marijuana Public Health Advisory Committee and the *Good to Know* Colorado campaign.¹ CDPHE is partnering with these agencies to continuously update and align information on the Colorado.gov/marijuana web portal and cross-promote resources and regulatory changes to retail marijuana. CDPHE meets regularly with CDE, CDHS, CDPS, DOR and CDOT to assure accuracy of messaging, align branding, share resources on campaign messages, and implement or promote effective strategies to prevent youth use.

Providing Resources and Support to Local Prevention Programs and Coalitions

CDPHE provides training, support and resources about retail marijuana education, youth prevention strategies and campaign materials for community agencies, community coalitions, state partners and those working with youth or other high-risk groups. CDPHE developed resources for these partners based on results of a needs assessment with local partners across the state. CDPHE connects local level efforts with statewide initiatives while providing local communities the skills needed to integrate campaign messages and resources into prevention and education programs.

Updating School Policies on Retail Marijuana: Resources and Support to Local Districts

CDPHE contracted with RMC Health to provide education to Colorado school districts and local public health agencies regarding the updates to the Tobacco Free Schools Law, which outlaws the use of retail marijuana products on school property. RMC Health reviewed and analyzed nearly all Colorado school district policies for compliance with updated language about retail marijuana (88 percent). This language included updates to school district Alcohol and Drug-free Workplace, Drug and Alcohol Involvement by Students and Public Conduct on School Property policies. Approximately 30 percent of school districts updated their policies to comply with the Alcohol and Drug-free Workplace or the Drug and Alcohol Involvement by Students policies. More than half of reviewed school districts have updated language in their Public Conduct on School Property policies. RMC Health is in the process of providing training, resources and support to review and revise current policies to comply with updated legislation and model policies. As of January 2015, RMC Health has responded to more than 30 requests for resources, training or support from several diverse stakeholders. RMC Health also created a webpage of school-related marijuana resources, including Colorado's Comprehensive Health Education Standards and evidence-based health education curricula with researched marijuana prevention outcomes: my.rmc.org/TFSMarijuana.

Healthy Youth Development Trainings

As outlined in C.R.S. § 25-3.5-1004, CDPHE is offering five regional training sessions on healthy youth development throughout spring 2015 for local prevention partners, public health agencies, substance abuse prevention coalitions, grantees of the Colorado Department of Human Services' Tony Grampsas Youth Services (TGYS) program and Office of Behavioral Health (OBH). The goal of regional training is to educate Colorado organizations that work with youth about retail marijuana educational and prevention efforts and youth development strategies. Training content includes information about the Positive Youth Development approach, state marijuana prevention efforts, marijuana campaign toolkits and resources, and suggestions for integrating marijuana prevention efforts and youth development strategies into existing programs.

Evaluation of Collaborative Efforts

CDPHE will work with the Colorado School of Public Health (CSPH) to evaluate the impact of prevention message integration efforts at the state and local level. CSPH will measure this effectiveness through the following:

- Participant evaluations of regional training to increase skills to implement effective local prevention strategies.
- The impact of CDPHE's work with RMC Health to increase policy compliance with the changes to the Tobacco Free Schools Law to include the prohibition of marijuana use.
- The impact of providing resources, materials and support to local programs or governments to increase integration of campaign messages.
- The impact of collaboration across state agencies to implement effective education strategies and integrate similar messaging across state agencies.

CSPH will assess the impact of CDPHE's efforts to integrate campaign messaging across state and local agencies by conducting regular and ongoing media scans. The media scan will end by May 1, 2015, and the data will be included in the November 1, 2015, report to the General Assembly.

Financial Report

Retail Marijuana Education Program Funding Categories

CDPHE's \$5,683,608 appropriation through Senate Bill 14-215 includes the following approximated funding breakdown:

CDPHE allocated approximately \$250,000 for public health trend data collection and monitoring of marijuana exposure across the state. This cost includes increasing sample sizes and adding questions about marijuana exposure on the Behavioral Risk Factor Surveillance System, the Pregnancy Risk Assessment Monitoring System, the Child Health Survey and Colorado Hospitalization data. This data will help to identify high-risk populations and assess evaluation results over time.

CDPHE contracted with the Colorado Schools of Public Health for \$500,000 to evaluate the impact of all education and public awareness efforts, including those beyond the campaigns.

Approx. Amount	Budget Area
\$ 250,000	Trend Data
\$ 500,000	Program Evaluation
\$ 60,000	Clinical Guidelines
\$ 39,000	School Policies
\$ 20,608	Youth Prevention Trainings
\$ 54,000	Materials and Resources
\$ 500,000	CDOT: DUI Education
\$ 260,000	Operating Expenses
\$ 4,000,000	Campaigns Statewide
\$5,683,608	Total

CDPHE allocated \$60,000 to employ temporarily a board-certified physician to develop, print and distribute clinical prevention guidelines for health care providers to improve the screening of and recommendations for marijuana use during pregnancy or while breastfeeding, prevent secondhand marijuana smoke exposure, particularly around children, and counsel parents on the importance of safe storage.

CDPHE contracted with RMC Health for \$39,000 to educate and support school districts to update policies and laws banning the presence of retail marijuana on school property.

CDPHE reserved \$20,000 for healthy youth development training across the state throughout spring 2015.

CDPHE reserved \$54,000 for the creation, printing and translation of fact sheets into the dominant languages of Colorado residents with limited English proficiency and maintenance of the Colorado.gov/marijuana website.

With the support of members of the Joint Budget Committee (JBC), CDPHE contracted \$500,000 to support public education to prevent marijuana-impaired driving. The revitalization of this campaign, led by the Colorado Department of Transportation (CDOT), is in the development process as of January 2015. CDPHE has reduced future funding requests by this amount for the next fiscal year because CDOT will submit a separate funding request to the JBC. This work meets part of CDPHE's goal to address high-risk groups impacted by marijuana use as outlined in C.R.S. § 25-3.5-1004.

A total of 3.73 full time equivalent (FTE) staff support all of the project activities required in statute and outlined above: 0.5 FTE project manager, 0.5 FTE substance abuse and systems change coordinator, 1.0 FTE marijuana communications specialist, 1.0 FTE marijuana education and youth prevention coordinator, 0.5 FTE fiscal and contracting support and 0.2 FTE healthy youth development trainer. CDPHE was allocated \$260,000 to support staff implementing all of the above work and providing resources and support to local level public health agencies, schools and prevention groups to integrate the public awareness efforts into their local communities.

CDPHE allocated \$4,000,000 for the development and execution of the public awareness campaigns as outlined in statute.

- Approximately \$2,250,000 was allocated for the first six months (January through June 2015) of the 18-month public awareness campaign on educating adults about Colorado marijuana laws and the importance of preventing diversion to youth. This cost includes formative research, creative concept development, focus group message testing, campaign production and public relations management, with the most of the money spent on media purchases to distribute statewide messaging via radio, television, digital ads, print ads and out-of-home ads (billboard, buses, etc.). This includes the cost of producing and airing a campaign specifically developed to reach Spanish-language audiences with culturally appropriate messages, scheduled to launch in spring 2015.
- CDPHE allocated \$125,000 to reach marijuana retailers with messages on the importance of preventing youth access. CDPHE and the contracted media agency will provide retailers with information and resources at point of sale to educate customers on effective ways to prevent youth access to marijuana products.
- CDPHE allocated another \$125,000 to conduct additional research on the most effective strategies to reach high-risk populations, such as youth and pregnant or breastfeeding women.
- Approximately \$1,500,000 for creative development, testing, production and media buys to fully execute the youth prevention campaign and initiate work on the prevention campaign for pregnant/breastfeeding women was delayed due to a shortfall in tax revenue. Though the current public awareness and education campaign does encompass prevention of diversion to youth through messaging and resources on safe storage, legal age requirements and talking to youth, it is important to target youth directly with a campaign that appeals to them through messages about healthy brain development using a supportive tone. The youth prevention campaign that will launch with the receipt of these funds will directly target youth through media tactics relevant to that age group. The recently passed Senate Bill 15-167 will reinstate the full \$1,500,000 in funding to CDPHE. After final approval from the Governor, CDPHE will begin the development of campaigns reaching youth and pregnant and breastfeeding women. Due to the delay, both campaigns will launch likely in summer and fall of 2015.

Retail Marijuana Education Program: Conclusion

CDPHE's Retail Marijuana Education program will continue to lead education and youth prevention efforts in Colorado to mitigate or reduce negative public health consequences of legalizing marijuana. CDPHE will expand partnerships at the state and local level, implementing innovative and data-driven initiatives and evaluating the effectiveness of those efforts. As the first state to legalize marijuana, Colorado bears a heavy burden that demands statewide leadership for prevention and education efforts. CDPHE will expand educational prevention programs and messaging based on data and the research available on effective strategies to reduce the public health burden of risky marijuana use and exposure in the state. CDPHE will report all data on the campaign effectiveness in the November 1, 2015, report to the General Assembly.

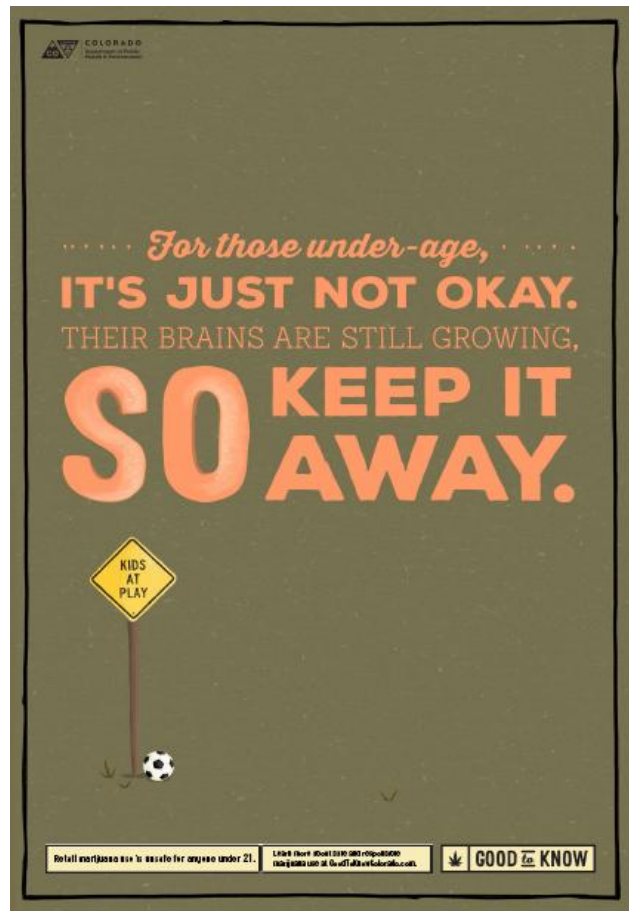
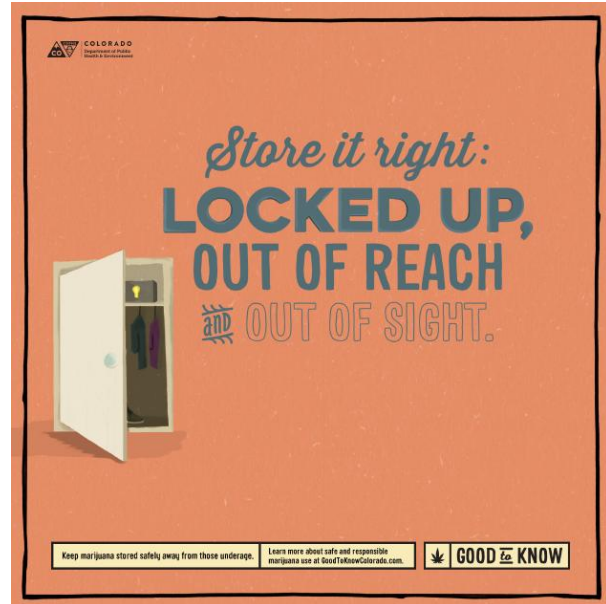
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Appendices

Appendix A. Good To Know Campaign Creative Design Examples

Good To Know: Print Advertising Examples




Be educated. Be responsible.

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- It's illegal to purchase, possess or use marijuana if you're under 21.
- It's illegal to use marijuana in public.
- It's illegal to take marijuana out of state.
- It's illegal to give or share marijuana with anyone under 21.
- Protect youth from underage marijuana use. Keep it locked up, out of sight and out of reach.



Good To Know: Retail Marijuana Frequently Asked Questions and Rack Card



FREQUENTLY ASKED QUESTIONS ABOUT RETAIL MARIJUANA
Here's What is Good To Know About The Law:

How old do I have to be to purchase, possess or consume marijuana?
You must be 21 years old to purchase, possess, or use retail marijuana or marijuana products. It is illegal to give or sell retail marijuana to minors.

Where can I purchase marijuana or other marijuana products?
You can purchase retail marijuana and related products at licensed retailers approved by the Colorado Department of Revenue and the local municipality. You must present a valid ID proving you are 21 years old, so be prepared. According to the retail marijuana rules passed by the Department of Revenue, no one under the age of 21 is allowed in the restricted portion of a retail store, so you cannot bring minors along with you.


How much can I purchase from a marijuana retailer?
Colorado residents 21 years and older can purchase as much as 1 ounce of retail marijuana at a time. Non-residents can purchase 1/4 ounce.

How much marijuana can I carry around with me?
Adults ages 21 years and older can possess or carry as much as 1 ounce of retail marijuana at a time. But remember, you cannot use it in public, including while driving or riding in a passenger vehicle.

Can I use the product at a café or in a local park?
Not in Colorado. The law bans public use of any retail marijuana product; including eating, drinking, vaping or smoking it anywhere the general public can go. This means it is illegal to use marijuana in amusement, sporting or music venues, parks, playgrounds, sidewalks, roads, marijuana retail businesses and outdoor and rooftop cafes, just to name a few. It's also good to keep in mind that retail marijuana use is illegal on federal land, which includes Colorado's ski resorts and national parks.

So where can I use marijuana?
Private property is your best bet; but again, there could be issues here. Property owners are allowed to ban the use and possession of retail marijuana on their properties, so if you rent, you may not be able to use marijuana in your home. Also, if you live in federally subsidized housing, any marijuana use or possession charges may mean that you lose your federal housing benefits since retail marijuana use is still illegal federally.

Can I use while I am cruising around town in my private vehicle?
Retail marijuana is regulated just like alcohol, so think of it like an open container law. Neither drivers nor passengers are allowed to open or use the product while in the car.



MARIJUANA IN COLORADO

Be educated. Be responsible.

.....

Who can buy, have or use it?

- ▲ You must be 21 to purchase, possess or use retail marijuana or marijuana products. It's illegal to give or sell retail marijuana to minors.
- ▲ Colorado residents 21 years and older can purchase as much as 1 ounce of retail marijuana at a time. Non-residents can purchase up to 1/4 ounce.
- ▲ Adults 21 years and older can purchase, possess, grow and transport as many as 6 marijuana plants in an enclosed and locked space, as long as it is not sold to anyone else. Only 3 of the plants can be mature (flowering) at any one time. If the home has residents under the age of 21, the grow area must be enclosed and locked in a separate space that minors cannot access.

If you use, where can you?

- ▲ Marijuana use is legal within the confines of private property. Just keep in mind that property owners can ban the use and possession of marijuana on their properties. Renters should be aware of their property owners' rules.

Appendix C

Retail Marijuana Education and Prevention Campaign Three-Year Evaluation Plan

Evaluation Plan for Activities from
July 1, 2014 – June 30, 2017

Submitted to the Colorado Department of
Public Health and Environment
by the Colorado School of Public Health

Executive Summary

This evaluation project supports the Retail Marijuana Education Program, including mass reach media campaigns. The Colorado Department of Public Health and Environment (CDPHE) was designated the lead for implementing public education efforts and aligning messaging across state agencies through Senate Bill 14-215. Statewide campaign messages will include resources from many state agencies, including the Colorado Department of Education (CDE), Colorado Department of Human Services (CDHS), Colorado Department of Revenue (DOR), the Governor's Office of Marijuana Coordination and the Colorado Department of Transportation (CDOT). The state will benefit from this project by increasing accurate knowledge of the retail marijuana laws in the state. CDPHE is funded through the marijuana tax cash fund to educate Colorado residents and visitors on safe, legal and responsible use of marijuana while mitigating negative public health consequences through implementation of the following activities:

1. An 18-month campaign directed at educating the public on the health effects of marijuana and legal parameters of use, including fact sheets and clinical guidelines for physicians.
2. An ongoing education and prevention campaign that further educates a) the public on legal use of marijuana, b) retailers on the importance of preventing youth access, c) high risk populations on safe use (to include youth use, pregnant/ breastfeeding women, secondhand marijuana smoke exposure among children, accidental ingestion by children, and more), and d) the public to prevent the over-consumption of edibles.
3. Provision of regional trainings and technical assistance annually for local programs that are addressing marijuana prevention.
4. Maintenance of a website portal to all state agency information on marijuana and advertise the existence of the website to the public.
5. Alignment of messaging across state agencies and integrate their information into the above campaigns/website.

Conducting evaluation of media campaigns and technical assistance will allow an understanding of how effective the campaigns are in increasing awareness, changing attitudes and behaviors related to safe, legal and responsible use of retail marijuana. The evaluation will be conducted over a 36 month period beginning September 2014, and has two primary goals: to assess the effectiveness of CDPHE's marijuana prevention and education campaign and website; and to assess the effectiveness of regional trainings, technical assistance, system-level collaborations and integration of campaign messaging across state agencies. Technical assistance includes the targeted provision of support, resources and materials that assist partners in implementing retail marijuana education work in their area. During the evaluation, CSPH will document changes in accurate knowledge of retail marijuana laws and the health impacts of marijuana use, changes in perceptions about problematic use of marijuana, changes in behaviors and awareness of specific and diverse marijuana campaigns statewide.

This evaluation plan is a living document to plan for and adapt the evaluation tools, methodology and indicators as the Retail Marijuana Education Program and Campaigns adapt to implement messaging and strategies responsive to the emerging needs and stakeholders engaged in educating Colorado residents and visitors about safe, legal and responsible marijuana use.

Program Background

CDPHE's Prevention Services Division was funded beginning July 1, 2014, to create statewide campaigns to educate Colorado residents and visitors on safe, legal, and responsible use of marijuana. CDPHE's \$5,683,608 appropriation through Senate Bill 14-215 includes funding for 3.7 FTE and operating expenses, surveillance/data collection (more information in the next section), evaluation of the campaigns, clinical prevention guidelines development, translation, educating school districts on marijuana laws for schools, creation of fact sheets and the development and execution of the program as outlined in statute.

CDPHE is contracting with the Colorado School of Public Health (CSPH) to evaluate the effectiveness of the Retail Marijuana Education Program. CSPH is a qualified evaluation partner that holds expertise, content knowledge, and demonstrated experience in the evaluation of both mass reach media campaigns to affect behavior and the evaluation of prevention programs on substance use or abuse.

Retail Marijuana Education Campaign Evaluation Advisory Workgroup

CSPH's evaluation team recruited key stakeholders from a variety of state and local agencies, substance abuse prevention professionals, marijuana industry representatives and other community representatives from around the state. This Retail Marijuana Education Campaign Evaluation Advisory Workgroup provides strategic guidance on the evaluation plan, evaluation goals, methodology, evaluation instruments, survey recruitment, data analysis, report distribution and implications of the results to refer to the Marijuana Education Oversight Committee, which advises CDPHE.

Stakeholders and Primary Intended Users of the Evaluation

The stakeholders and primary users of this evaluation are listed in Table 1. The uses of this evaluation have the potential to be wide reaching, beyond that of traditional stakeholders such as groups and organizations involved directly with retail marijuana sales and use in Colorado. The evaluation may be beneficial to the community at large, potentially all community groups and individuals that have an interest in improving the health and wellbeing of the Colorado population.

The evaluation can also contribute to an evidence-base for the effectiveness of retail marijuana campaigns and inform parties outside of Colorado on the processes, strengths, and challenges for implementing a Retail Marijuana Education and Prevention Campaign at the state and local levels.

The evaluation stakeholders will be engaged throughout the development and implementation of the evaluation plan. The evaluation findings that will be communicated to the stakeholders include results specific to the evaluation goals, and progress made toward distal and proximal objectives. Based on the interest of the stakeholders, the evaluation will be designed to help decision makers:

- Understand current population knowledge of, attitudes toward and behaviors related to recreational marijuana use and whether and/or how it has changed between 2014-2017,
- Understand the level of exposure statewide to marijuana education and prevention campaigns,

- Understand the relationship between marijuana education and prevention campaign exposure and changes in knowledge of, attitudes toward and behaviors related to recreational marijuana use and whether and/or how it has changed between 2014-2017,
- Prioritize future social marketing education and prevention campaigns, and
- Determine the most appropriate allocation of public health and social service resources to support healthy, appropriate and legal consumption of recreational marijuana.

Table 1. Stakeholder interests and anticipated evaluation uses

Brief list of key National Stakeholders	Centers for Disease Control and Prevention (CDC) Office of National Drug Control Policy (ONDCP) Substance Abuse and Mental Health Services Administration (SAMHSA) National advocacy groups with interest in marijuana legalization concerns, such as the ACLU, NAACP and DPA Veterans Administration Other US State and Local Governments
Brief list of key State-Level Stakeholders	Colorado General Assembly CDPHE - leadership and programs CDPHE - Office of Planning and Partnerships (OPP) Colorado Department of Human Services Colorado Department of Health Care Policy & Financing Colorado Department of Transportation Colorado Department of Education Colorado Attorney General Substance Abuse Trend & Response Task Force Colorado Governor's Office
Brief list of key Local-level Stakeholders	Colorado Association of Public Health Officials (CALPHO) Retail and Medical Marijuana Grower Associations Local public health agencies (LPHAs)* Places that interact and provide services to children like schools, child care, libraries, community groups, etc. Parents and Families Other local governments or other organizations with an interest in Retail and Medical Marijuana Colorado County Attorney's Association Colorado District Attorney's Association CDHS grantees - Tony Grampsas Youth Services Program; Access to Recovery; Prevention and Intervention Programs Local Chambers of Commerce State & local tourism associations Cleaning/maid services (tourism industry) Retail marijuana industry Medical marijuana industry Medical marijuana patient advocacy groups

Interest in the Evaluation	Information on levels of awareness of retail marijuana laws and health effects, perceptions of risk, prevention messages for youth, and responsible use behaviors among adults. Information on what impact campaign messages have on changing those levels of awareness, perceptions of risk, and behaviors
When to engage	Through legislatively mandated report timelines of March 1, 2015 and November 1, 2015, and at least annually otherwise
What to Communicate	Evaluation results, differences in impact across regions or certain populations
Communication plan	Share Written Report; schedule presentations as requested

Evaluation Background

Conducting evaluation to understand the impact of CDPHE’s marijuana education and prevention campaign is a primary core activity of the Violence and Injury Prevention – Mental Health Promotion Branch of the Colorado Department of Public Health and Environment. A multi-level evaluation design is required to capture adequately the impact of social marketing and collaboration strategies on the knowledge of retail marijuana laws, perceptions of risk and responsible use behaviors among Colorado adults.

The focus of this evaluation project is to understand current and ongoing knowledge of, perceptions of and behaviors related to retail marijuana, whether Coloradans are viewing education and prevention campaign materials and whether there is a relationship between viewing the campaign and changes in retail marijuana knowledge, perceptions and behaviors.

The evaluation framework designed by the Centers for Disease Control and Prevention (CDC) was applied during the evaluation planning process and provided a guide for designing and conducting the evaluation. The following standards were applied throughout the development of the evaluation plan: utility (serve the information needs of intended users); feasibility (be realistic, prudent, diplomatic and frugal); propriety (behave legally, ethically and with regard for the welfare of those involved and those affected); and accuracy (reveal and convey technically accurate information).

The CDC evaluation framework includes the following steps:

1. Engage stakeholders: Those persons involved in or affected by the program and primary users of the evaluation.
2. Describe the program: Need, expected effects, activities, resources, stage, context, logic model.
3. Focus the evaluation design: Purpose, users, uses, questions, methods, agreements.
4. Gather credible evidence: Indicators, sources, quality, quantity, and logistics.
5. Justify conclusions: Standards, analysis/synthesis, interpretation, judgment, recommendations.
6. Ensure use and share lessons learned: Design, preparation, feedback, follow-up, and dissemination.

Evaluation Goals

Primary goals of the evaluation are to (1) assess the effectiveness of CDPHE’s marijuana prevention and education campaigns and website; and (2) assess the effectiveness of regional trainings, technical assistance, system-level collaborations and integration of campaign messaging across state agencies. *Secondary goals* include assessing changes in marijuana-related behaviors over time.

Evaluation Deliverables

Evaluation of CDPHE’s marijuana education campaign will include but not be limited to the following deliverables:

1. Completed three-year evaluation plan developed with goals, objectives, timelines and monitoring plan.
2. Recommendations for the media-agency contractor on focus group recruitment, focus group methodology and guide, qualitative analysis, formative testing of messages and best practices for reporting results for focus groups on message development and creative testing/response.
3. Development of evaluation tools that receive CDPHE approval prior to use.
4. Cognitive testing of surveillance questions related to marijuana use.
5. Completed baseline survey of campaign recognition, knowledge and behavioral questions by December 31, 2014 (including recognition of CDOT, DOR, CBS, CDHS and Governor’s Office Campaigns).
6. Completed annual evaluation reports on the reach (including the gross rating points from the media/ advertising agency) and effectiveness of the campaigns and other prevention efforts.
7. Complete two reports prepared for the Colorado General Assembly due to CDPHE by February 1, 2015 and September 1, 2015.

Survey Methodology

Our evaluation will include surveying a large panel of Colorado adults (roughly 1,000) who consent to discuss marijuana-related knowledge and attitudes before and after media campaign waves, and multiple cross-sectional quantitative surveys of audiences of interest, i.e. clinicians, marijuana retailers, youth under age 18 and pregnant or breastfeeding women administered at four time points over 36 months. Other assessments include analyses of secondary data sets with information on marijuana education and prevention knowledge attitudes and behaviors at three time points; and an organizational assessment of the quality of technical assistance and collaboration among CDPHE supported organizations. The evaluation will address the following questions:

- 1) What is the knowledge of, perceptions of and behaviors related to retail marijuana statewide?
- 2) How have these changed over time?
- 3) How have retail marijuana education and prevention campaigns contributed—if at all—to these changes?

A thorough review of all marijuana campaign evaluation action plans and logic models yielded a comprehensive list of all possible indicators for each of the evaluation questions within each of the project goals. Key stakeholders were invited to participate on an Evaluation Campaign Advisory

Workgroup to critique the list of indicators for the evaluation, highlight any gaps, and prioritize the most meaningful and impactful. Following the selection of indicators, key stakeholders and evaluation staff participated in several discussions to determine the best and most feasible data sources, data collection instruments and data analysis to collect data on the indicators.

Pilot testing and community input on survey measures

CSPH will draft survey instruments using existing items from the Behavioral Risk Factor Surveillance System, the Healthy Kids Colorado Survey (which includes Youth Risk Behavioral Surveillance questions), Monitoring the Future survey and from surveys used in a research study by one of CSPH's project evaluators on medical marijuana funded by the National Institutes of Health. CSPH will hold focus groups to inform the development and readability of each of the evaluation instruments, including: (a) the general population survey, (b) the youth survey, (c) survey with pregnant and nursing women, and (d) the retailer/user questions. CSPH will test proposed items by asking participants to read and answer the initial draft questionnaire. CSPH will ask participants to discuss how they interpreted and generated responses for each question. CSPH will ask participants to identify confusing wording, unintended meanings and gaps in questions. CSPH will use the responses from focus group participants to improve the survey instruments for each target group.

Mixed-Mode Panel Survey Design

CSPH will use a mixed-mode panel survey on the knowledge of the laws and health effects of retail marijuana use and perceptions of risk and behaviors around marijuana access and use. A panel of approximately 1,000 Colorado adults will be surveyed before the campaign begins (baseline) and again three months after the campaign peaks (follow-up) to assess of changes in knowledge and attitudes that may be attributable to the campaign.

The panel will be drawn from a Survey Research Registry maintained by CSPH of more than 9,000 Colorado adult volunteers who completed a random-sample population-level survey in 2012. All Registry members will be eligible to be sampled for the mixed-mode marijuana survey. The evaluation panel will not be designed to represent the Colorado 2014 adult population; the selection process will oversample African Americans, Latinos, younger adults (aged 20-31) and respondents to a previous registry survey in winter 2014 who reported recent (past-30-day) marijuana use in order to obtain more precise information about them. In this way, the evaluation will be able examine the media campaign's effectiveness among these important groups. CSPH will contact all registry members included in the panel through their preferred mode (postal mail or telephone). CSPH has set the goals of a response rate above 60 percent.

Analyses will include overall rates and differences among demographic and marijuana-use subgroups regarding knowledge of laws and risk related to marijuana use. Analysis will compare the knowledge, perceptions and behaviors of marijuana users with those that do not report recent marijuana use. After CDPHE marijuana education campaigns are conducted, follow-up surveys will provide similar data and analyses will compare those results with baseline results to see whether knowledge and risk perceptions are different before and after the campaigns and if they vary based on exposure to campaign messages.

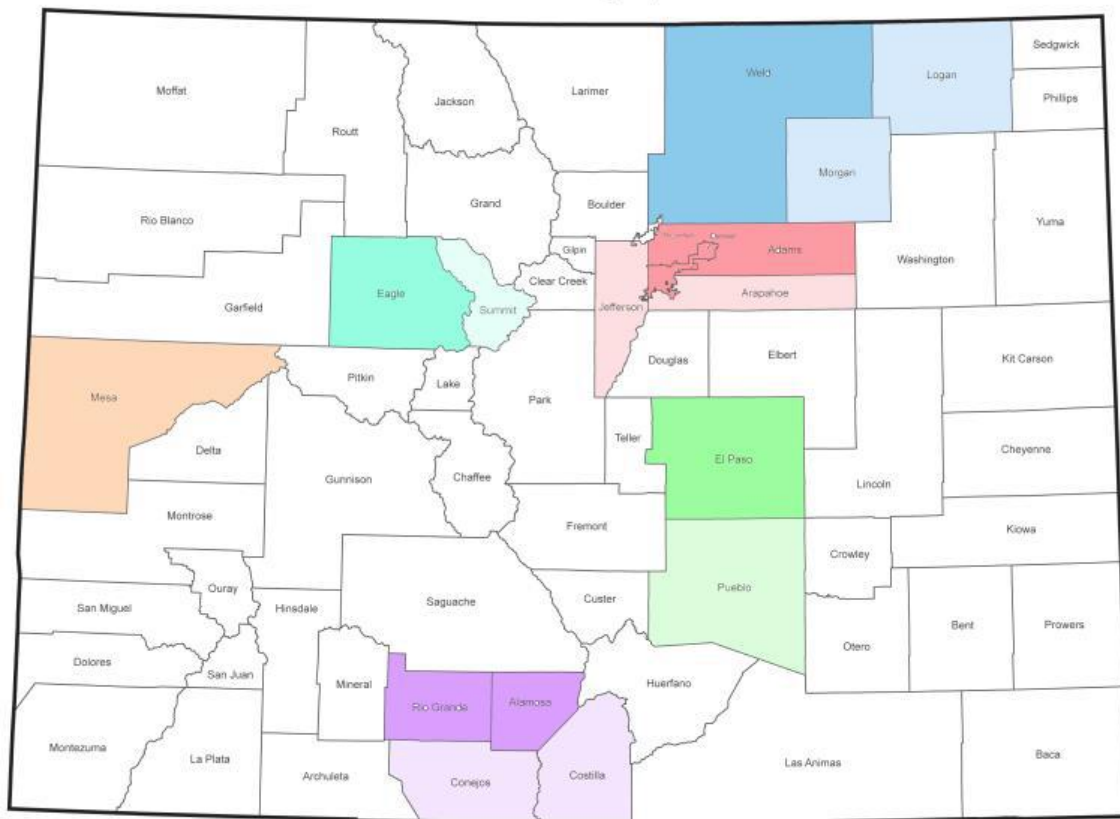
Community-based Survey Design

In addition to the mixed mode survey of a statewide sample of Colorado adults described above, CSPH will conduct a survey with a probability sample of selected groups statewide using a Venue-Day-Time (VDT) survey methodology. Evaluators use this methodology to find hard to reach or specific populations and consider this approach more rigorous than a convenience sample. The survey will focus on knowledge and risks associated with retail marijuana use, and CSPH will target youth, pregnant or breastfeeding women, clinicians and retail marijuana growers and users.

To supplement and offer more in-depth information from these groups, CSPH will conduct in-depth telephone interviews with a convenience sample of participants from each of these groups. CSPH will also identify participants from those that complete a community survey or based on referrals from members of the Campaign Evaluation Advisory Workgroup.

The VDT probability sample will include approximately 500 persons from rural and urban counties across the state. Counties for the survey were selected at random based on their overall population, including counties with the highest and lowest numbers of residents; counties with the highest numbers of Latino/Hispanic and African American residents; counties with high numbers of youth under age 21; and counties representing urban and rural populations. Shown in the map here are all the counties (shaded) entered into the sampling frame. Those selected at random from among those in the sampling frame included Denver, Adams, Weld, El Paso, Mesa, Eagle, Rio Grande and Alamosa.

Colorado County Map



Produced by the Colorado Department of Education Data Support Services Unit - May 2017

After selecting counties, CSPH will identify community organizations, public settings and businesses with increased likelihood to find audiences targeted for the survey. These audiences include clinicians who provide care to youth and pregnant women, retailer marijuana business staff, youth and pregnant women. CSPH will contact representatives from these organizations, settings and businesses to explain the purpose of the venue-day-time survey and obtain permission for recruiting survey participants in these settings, unless the setting is already public (e.g. a city park or street corner).

After identifying locations to recruit participants in each county, CSPH will enumerate estimates of how many target audience members for each survey at each setting in a 2.5-hour period. CSPH will go to the venue on days of the week and times of the day when there is an anticipated high volume of clientele and count the potential participants that they observe entering the venue. If estimates yield at least six completed surveys in a given venue on a specific day and time, then the location will be included in the final sampling frame. These VDTs will comprise the final sampling frame.

This sampling approach is one that is methodologically more rigorous than one employing a convenience sample. Biases associated with non-random selection of venues days and times for data collection include collecting data where it is most convenient for the staff, or on days of the week or times of the day that are preferred. These biases may mean that participants in a given venue may have a greater likelihood of being selected and included in the sample. CSPH reduces these biases by using the VDT approach.

While this is a more rigorous approach than a convenience sample, it does not completely remove bias, and results are not generalizable to the clinician, retailer/user, pregnant and youth populations in Colorado. CSPH deliberately selected geographic areas where there were higher and lower populations to obtain a distribution of urban/rural respondents; areas where CSPH would be likely to find higher concentrations of youth at risk, defined as youth living in areas with higher poverty and higher crime rates. CSPH deliberately selected venues with higher likelihood to encounter minority populations, in particular African American and Latino participants.

CSPH considers the findings from this community VDT sample a supplement to enhance those from the mixed-mode survey. CSPH underscores that they are not generalizable to the population of Colorado as a whole.

Analysis of the VDT surveys will include descriptive statistics with frequencies for all the survey measures for the total sample as well as for each subgroup surveyed. Future analyses will include overall rates and differences among demographic and marijuana-use subgroups regarding knowledge of laws and risk related to marijuana use. After CDPHE implements the marijuana education campaigns, follow-up surveys will provide similar data and analyses. CSPH will compare those results with baseline results to see whether knowledge and risk perceptions are different before and after the campaigns.

Methodology to Evaluate Trainings and Technical Assistance

The CSPH worked closely with CDPHE to identify suitable databases to collect and measure information about all interactions with local governments, programs, schools and prevention coalitions as well as state agencies collaborations. The information about these interactions, their frequency, the most common requests for materials and support, common questions or concerns that the CDPHE has not yet addressed will be calculated and monitored for changes over time.

CSPH will assess the impact of CDPHE's efforts to integrate campaign messaging across state and local agencies by conducting regular and ongoing media scans, largely consisting of internet searches and targeted requests or interviews specific agencies. The media scan data will be included in the November 1, 2015, report to the General Assembly.

CSPH will create a multi-stage assessment of the effectiveness of the Healthy Youth Development Trainings provided by CDPHE to local communities and partners, as outlined in C.R.S. § 25-3.5-1004. Post-evaluations of the trainings will assess participants' implementation of retail marijuana education and youth prevention efforts since the training event.

Methodology to Evaluate Intra-agency Collaboration and Message Alignment

Many state agencies are involved in retail marijuana efforts for prevention, regulation and educational purposes. CSPH will assess collaborative activities between CDPHE and the Colorado Departments of Human Services, Revenue, Education, Transportation, Law, Health Care Policy and Financing, Public Safety and the Governor's Office.

CSPH will capture collaborative efforts via an online reporting system using Microsoft Access forms, a smart-Word template that can be completed electronically or printed out and by phone-based agency interviews with representatives from each of CDPHE's state partners noted above. To document the extent to which state agencies work with CDPHE on retail marijuana education and prevention efforts, CSPH will report descriptive data about the types and frequency of collaboration activities. Means/percents from Likert-type questions will capture agencies perception of the utility, benefits and challenges associated with collaboration.

CSPH will document current messaging efforts by state agencies and assess CDPHE's ability to integrate messaging across organizations. Messaging information from the Colorado Departments of Human Services, Revenue, Education, Transportation, Law, the Health Care Policy and Financing, Public Safety and the Governor's Office will be evaluated. Marijuana industry and local public health agencies media efforts will also be documented, as available.

Messaging information will be collected through an ongoing media scan by CSPH with an electronic data capture tool using Microsoft Access forms. This form will capture descriptive information such as the campaign name, tagline, key points, focus area, intended audience and media outlet and will speak to a representative from each of CDPHE's state agency partners (listed above) to ensure CSPH captured all media campaign efforts. To document the retail marijuana messaging efforts by state agencies, CSPH will provide a descriptive overview of media activities. Messages will be

compared/contrasted for consistency across agencies. To understand the extent to which retail marijuana messaging efforts are aligned among organizations, CSPH will create a coding schema based on the Governor's Office of Marijuana Coordination communication plan.

Focus Group Recommendations For The Media-Agency Contractor

Colorado School of Public Health (CSPH) faculty will provide Cactus, the campaign contractor, with detailed technical assistance on focus group methodology. Specifically, this technical assistance will include detailed information on how to create a topic guide; how to effectively moderate a focus group discussion; and how to analyze focus group data using a content analysis methodology. CSPH will also review focus group guides developed by the media-agency contractor to ensure that a public health approach is maintained. CSPH will share results from the cognitive testing of surveillance and evaluation tools that are relevant for campaign development. Additionally, any results from the baseline mixed-mode or community survey that are relevant for campaign development will be shared with the media-agency contractor.

Cognitive Testing Of Surveillance Questions and Evaluation Tools

Initial survey instruments will be drafted using existing items from the Behavioral Risk Factor Surveillance System, the Healthy Kids Colorado Survey, Monitoring the Future and from surveys used in a research study by one of our project evaluators on medical marijuana funded by the National Institutes of Health. CSPH will provide cognitive testing of questions for: a) the general population survey, (b) the youth survey, (c) survey with pregnant and nursing women, and (d) the retailer/user questions. CSPH will test proposed items by asking participants to read and answer the initial draft questionnaire and talking through how participants determined their responses to help CSPH identify confusing wording, unintended meanings, and gaps in questions. Following this process, CSPH will meet with CDPHE staff to finalize the mixed mode survey and community surveys prior to implementation in the field.

Indicators

Table 2, the Retail Marijuana Education and Prevention Campaign Evaluation and Methods Design table, summarizes the specific indicators that CSPH will measure in order to answer evaluation questions, including different indicators to measure the evaluation questions and different sources and methodologies to collect data on the indicators. Table 2 also includes the known limitations, timeframe and responsibility for data collection and evaluation stakeholders for the indicators. The overall evaluation design is a mixed-method approach that combines quantitative and qualitative approaches and methods to maximize the strengths of each approach and gather the best data to measure the evaluation indicators.

Table 2. Retail Marijuana Education and Prevention Campaign Evaluation Methods and Design

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
1. Participation and Representation						
Is there adequate representation from stakeholders/external partnerships to implement the Retail Marijuana Education Program (RMEP) Campaign? To what extent have partners fulfilled their goals?	Representation from diverse geographic areas, clinicians, public health professionals, youth serving professionals, and retailers on advisory boards	RMEP Campaign Evaluation Advisory Workgroup	Quarterly meeting logs	Document participation from stakeholders in quarterly advisory board meetings	Not representative; contingent upon persons who can travel and meet when scheduled	Once in 2014 and Quarterly in 2015; 2016; 2017
2. Awareness of the Colorado Retail Marijuana Education and Prevention (RMEP) Campaign						
To what extent has the population of Colorado been exposed to the RMEP Campaigns?	Campaign reach and market penetration Awareness of RMEP Campaign elements; Awareness of other non-RMEP campaigns	Post-campaign media data Survey panel of approx. 1,000 Colorado adults	Mixed-mode (telephone and postal mail) survey of panel members	Estimate campaign reach using established survey questions (unprompted recall of themes/messages; recognition of prompted themes messages; perceived message salience and qualities, etc.). Compare reach across time and among selected population segments (e.g. men vs. women; rural vs. urban residents)	Panel may not be weighted to represent Colorado adult population	2014, 2015, 2016, 2017 Levinson

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
To what extent have youth, pregnant women, clinicians, and retailers/growers been exposed to the RMEP Campaigns?	Campaign reach and market penetration Awareness of RMEP Campaign elements; Awareness of other non-RMEP campaigns	Venue-day time probability sample of 500 youth and adult Coloradoans	Self-administered tablet survey using Research Electronic Data Capture (REDCap)	Develop indices and scales to document overall awareness; Compare these data over time across multiple surveys; Control for demographic characteristics and other possible confounders and for exposure to other non-RMEP campaigns	Not generalizable to entire population	2014, 2015, 2016, 2017 Bull
3. Knowledge of retail marijuana-related laws						
To what extent does the RMEP campaign help to increase the general public's (age 21 and older) accurate knowledge of the retail marijuana laws in CO?	Responses to questions on the laws pertaining to age restrictions, locations where marijuana can be used, possession, plant growing, driving under the influence, transportation of marijuana out of state, importance of law; Awareness of RMEP Campaign elements Awareness of other non-RMEP campaigns	Survey panel of approx. 1,000 Colorado Adults	Mixed-mode (telephone and postal mail) survey of panel members	Multivariate regression analyses comparing pre- and post-campaign knowledge with effect (interaction/confounding or mediation/moderation) of RMEP campaign awareness on post-campaign measures; same analyses for selected population segments (e.g., marijuana recent-users and non-users, men and women, etc.) Compare these data over time across multiple surveys; Control for demographic characteristics and other possible confounders and for exposure to other non-RMEP campaigns	Panel may not be weighted to represent Colorado adult population	2014, 2015, 2016, 2017 Levinson

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
To what extent does the RMEP campaign help to increase accurate knowledge of the retail marijuana laws in CO among youth, pregnant women, clinicians, and retailers/growers?	<p>Responses to questions on the laws pertaining to age restrictions, locations where marijuana can be used, possession, plant growing, driving under the influence, transportation of marijuana out of state, importance of law;</p> <p>Awareness of RMEP Campaign elements</p>	Venue-day time probability sample of 500 clinicians, retailers, pregnant women and youth;	Self-administered tablet survey using Research Electronic Data Capture (REDCap)	<p>Calculate percent of correct answers to questions overall and by subgroups within sample (youth, pregnant women, clinicians, and retailers/growers African Americans; Latinos); identify indicators to document overall awareness;</p> <p>Compare these data over time across multiple surveys;</p> <p>Control for demographic characteristics and other possible confounders and for exposure to other non-RMEP campaigns</p>	Not generalizable to entire population	2014, 2015, 2016, 2017 Bull

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
4. Knowledge of risks related to retail marijuana use in Colorado						
To what extent does the RMEP campaign contribute to accurate knowledge of the risks associated with retail marijuana use?	<p>Health risks associated with:</p> <ul style="list-style-type: none"> a. weekly and daily marijuana use for adults; teens; b. Frequent or regular use among pregnant women; breastfeeding women c. extracting hash oil in the home; d. consumption of multiple servings of edible marijuana; and e. storage of marijuana in homes where there are children; <p>Awareness of RMEP Campaign elements</p> <p>Awareness of other non-RMEP campaigns</p>	Survey panel of approx. 1,000 Colorado Adults	Mixed-mode (telephone and postal mail) survey of panel members	<p>Multivariate regression analyses comparing pre- and post-campaign knowledge with effect (interaction/confounding or mediation/moderation) of RMEP campaign awareness on post-campaign measures; same analyses for selected population segments (e.g., marijuana recent-users and non-users, men and women, etc.)</p> <p>Compare these data over time across multiple surveys;</p> <p>Control for demographic characteristics and other possible confounders and for exposure to other non-RMEP campaigns</p>	Panel may not be weighted to represent Colorado adult population.	2014, 2015, 2016, 2017 Levinson

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
To what extent does the RMEP campaign help to increase the accurate knowledge of the risks associated with retail marijuana use among youth, pregnant women, clinicians, and retailers/growers?	<p>Health risks associated with:</p> <ul style="list-style-type: none"> a. weekly and daily marijuana use for adults; teens; b. Frequent or regular use among pregnant women; breastfeeding women c. extracting hash oil in the home; d. consumption of multiple servings of edible marijuana; and e. storage of marijuana in homes where there are children; <p>Awareness of RMEP Campaign elements;</p> <p>Awareness of other non-RMEP campaigns</p>	Venue-day time probability sample of 500 Clinicians, retailers, pregnant and/or breastfeeding women and youth;	Self-administered tablet survey using Research Electronic Data Capture (REDCap)	<p>Calculate percent of answers to questions overall and by subgroups within sample (youth, pregnant women, clinicians, and retailers/growers; African Americans; Latinos); develop indices and scales to document overall awareness;</p> <p>Compare these data over time across multiple surveys;</p> <p>Control for demographic characteristics and other possible confounders and for exposure to other non-RMEP campaigns</p>	Not generalizable to entire population	2014, 2015, 2016, 2017; Bull

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
To what extent do groups at risk understand health risks associated with retail marijuana use?	<p>Health risks associated with:</p> <p>a. “regular” marijuana use for adults; teens (note regular use is not consistently defined or agreed upon);</p> <p>b. Frequent or regular use among pregnant women; breastfeeding women</p> <p>c. extracting hash oil in the home;</p> <p>d. consumption of multiple servings of edible marijuana; and</p> <p>e. storage of marijuana in homes where there are children</p>	Data from multiple secondary sources, e.g. Pregnancy Risk Assessment and Monitoring Survey (PRAMS), Healthy Kids Colorado Survey, Behavioral Risk Factor Surveillance Survey	Abstraction from publicly available data sets	<p>Calculate answers to marijuana related questions (e.g., behaviors, perceptions of risk) overall and by subgroups within samples (e.g., youth, pregnant women,; African Americans; Latinos);</p> <p>Compare these data over time across multiple surveys;</p> <p>Control for demographic characteristics and other possible confounders</p>	No data on exposure to RMEP campaigns, so cannot make causal inferences from data on relationships between exposure to RMEP campaign and change in understanding over time	2014 CDPHE; 2015; 2016; 2017 Corsi

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
5. Marijuana behaviors						
What is the relationship between exposure to RMEP Campaign elements and <u>illegal marijuana behavior</u> among high-risk populations in Colorado?	Underage use; Purchasing for marijuana for a minor; having more than the legal amount; smoking in public; transporting marijuana across state lines; limiting access to marijuana for those under 21;	Venue-day time probability sample of 500 youth and adult Coloradoans;	Self-administered tablet survey using Research Electronic Data Capture (REDCap)	Calculate percent who perform each behavior overall and by subgroups within sample (youth, pregnant women, clinicians, and retailers/growers; African Americans; Latinos; clinicians; pregnant women) Compare these data over time across multiple surveys; Control for demographic characteristics and other possible confounders	Not generalizable to entire population Rare behavior/small numbers	2014, 2015, 2016, 2017; Bull
To what extent do groups at risk use marijuana?	Use of marijuana Frequency of use in 30 days	Data from multiple secondary sources, e.g. Pregnancy Risk Assessment and Monitoring Survey (PRAMS), Healthy Kids Colorado Survey, Behavioral Risk Factor Surveillance Survey	Abstraction from publicly available data sets	Calculate answers to questions overall and by subgroups within samples (youth, pregnant women, clinicians, and retailers/growers; African Americans; Latinos) Compare these data over time across multiple surveys; Control for demographic characteristics and other possible confounders	No data on exposure to RMEP campaigns, so cannot make causal inferences from data on relationships between exposure to RMEP campaign and change in behavior over time	2014 CDPHE; 2015; 2016; 2017 Corsi

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
To what extent do groups at risk engage in illegal marijuana behavior?	Underage use;	Data from multiple secondary sources, e.g. Pregnancy Risk Assessment and Monitoring Survey (PRAMS), Healthy Kids Colorado Survey, Behavioral Risk Factor Surveillance Survey	Abstraction from publicly available data sets	<p>Calculate answers to questions overall and by subgroups within samples (youth, pregnant women, clinicians, and retailers/growers; African Americans; Latinos)</p> <p>Compare these data over time across multiple surveys;</p> <p>Control for demographic characteristics and other possible confounders</p>	No data on exposure to RMEP campaigns, so cannot make causal inferences from data on relationships between exposure to RMEP campaign and change in behavior over time	2014 CDPHE; 2015; 2016; 2017 Corsi

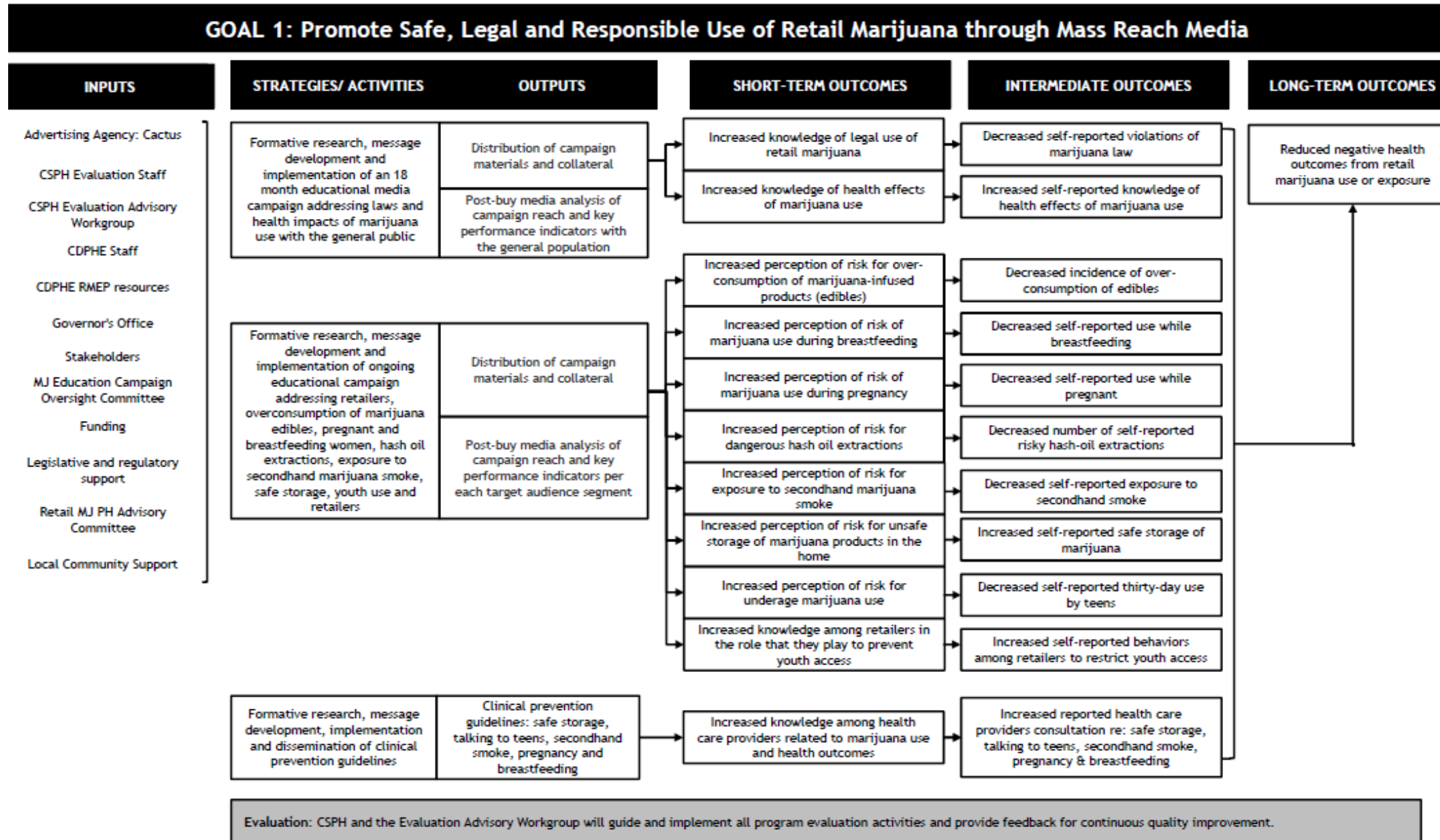
Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
6. Effectiveness of trainings						
To what extent did participating in CDPHE regional trainings increase attendees utilization of underage marijuana (MJ) prevention strategies?	<p>1. Training details (# of trainings, attendee affiliation, purpose of agency, participant needs)</p> <p>2. Materials distributed; participant's satisfaction and perceived usefulness of training & materials, additional need for information</p> <p>3. Self-reported utilization/ implementation of training materials/information by participants after event</p>	Self-report data drawn from attendees of 5 regional trainings that are geared towards CO organizations working with at risk youth.	<p>1. Regional Training Event Log</p> <p>2. Initial Training Questionnaire</p> <p>3. Post-Regional Training Survey</p>	<p>1. Analysis from the <i>Regional Training Event Log</i> and <i>Initial Training Questionnaire</i> will be descriptive in nature and detail attendee characteristics; MJ prevention education needs; current use of MJ prevention activities; the material/information they received at the trainings; their satisfaction and perceived utility with the training information.</p> <p>-Means/percents from Likert-type questions will capture attendee satisfaction/utility</p> <p>2. Analysis of the <i>Post-Regional Training Survey</i> will be descriptive in nature and document how the training material/information was implemented</p> <p>-Examine initial and post-training responses to determine the change in MJ youth prevention activities after training</p>	<p>Self-report data prone to multiple response biases</p> <p>3-4 trainings will be held in late Spring/early summer leaving little time to capture post-training data; this will limit participant's ability to incorporate training material into their program and the numbers of individuals with follow-up data</p> <p><i>Regional trainings are still being planned and this initial evaluation plan may need to be modified as necessary</i></p>	<p>1 & 2. Dates TBD - Brooks</p> <p>3. 3-4 weeks post-training - Brooks</p>

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
7. Effectiveness of technical assistance						
What MJ education & prevention information is needed by TA requestors/users?	1. Requestors' affiliation information (agency, purpose of agency) 2. Requestors' needs at outset	Self-report data drawn from user's of the CDPHE Technical Assistance (TA) service. The TA service is geared towards those working the public (e.g., public health agencies, educational setting, and regulatory organizations) rather than individuals.	Baseline TA Questionnaire issued via the FreshDesk platform auto distribution or data collected by TA Lead for requests that come in-person or phone calls	1. Descriptives of TA requestor and requestor needs pulled from Baseline TA Questionnaire	Non-comparative, non-inferential design Not generalizable to entire population	Nov. 1, 2014 - ongoing Brooks, CDPHE
Were TA requestors satisfied with TA services and should other types of materials be developed by CDPHE for distribution?	1. Requestors satisfaction and perceived usefulness ratings 2. Additional request for material/information	Same as above	1. Initial FU TA Survey - issues via FreshDesk/Survey Monkey	1. Descriptives of TA information received 2. Means/percents from Likert-type questions will capture attendee satisfaction/utility of information	Potentially low return rates Little time to implement the use of new information	1. Nov 1, 2014 - ongoing (auto distribution) 2. Nov 1, 2014 - ongoing Brooks
To what extent did CDPHE's TA increase users' utilization of MJ educational and prevention information?	Utilization/ implementation of TA information/ resources by requestors after TA	Same as above	1. Initial Follow-Up TA Survey - FreshDesk/ Survey Monkey 2. 2-mth FU TA Survey - Survey Monkey	1. Examine initial and FU survey responses to determine the change in MJ education /prevention activities over time	Potentially low return rates May have low numbers of individuals eligible for 2-month FU	1. Nov 1, 2014 - ongoing (auto distribution) 2. Nov 1, 2014 - ongoing Brooks

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
8. Collaboration across state agencies						
To what extent are state agencies working together regarding MJ education and prevention efforts?	Detailed list of collaboration activities and collaboration frequency	1. Data collected on an ongoing basis by CDPHE's Substance Use Prevention Coordinator 2. Self-report data by collaborating agencies (includes CDE, CDHS, CO Dept of Law, CDPS, DOR, CDOT, HCPF, Governor's Office, Others as requested)	1. Collaboration Event Log of recent activities 2. Advisory Group Meetings Event Log 3. Agency Interviews	1. Description of collaboration activities pulled from Monthly Event Log, Advisory Group Meetings Event Log, and Agency Interviews (what activities are occurring, frequency of occurrence, participation in meetings)	Non-comparative, non-analytical design Not generalizable Biases in data recall and responses	1. Nov 1, 2014 - ongoing - CDPHE 2. Nov 7 - ongoing - Brooks
What has been the nature of the collaboration relationship?	Agency reports of the benefits of, problems with, and ways to increase collaboration	1. Self-report data by collaborating agencies (listed above)	Agency Interviews	2. Means/percents from Likert-type questions will capture agencies satisfaction/utility/benefit/problems associated with collaboration	Same as above	Mar 1-Mar 15, 2015 - Brooks

Evaluation questions <i>What you want to know.</i>	Indicators <i>What type of data you will need.</i>	Data sources/participants/ target population <i>Where and from whom you will get the data.</i>	Data collection instruments <i>How you will get the data.</i>	Data analysis <i>How you will make sense of the data.</i>	Known limitations <i>Limits of the collection or analytical approach.</i>	Timeframe and responsibility <i>When and who will collect the data.</i>
9. Message integration across state agencies						
What MJ messaging efforts are being conducted by state agencies?	Detailed list of current MJ messaging efforts	Data collected from the CSPH using a structured data collection instrument on an ongoing basis. Data will be located by several means including, but not limited to, internet searches, requests to government and community agencies, Governor's office	1. Media Scan Data Collection Tool 2. Agency Interviews 3. Advisory Group Meetings Event Log	1. Descriptives of messaging activities (tagline, focus area, message frequency, outlet, medium, call to action)	Non-comparative, non-analytical design Not generalizable Data not located in central location so some information may be missing	1. Nov 1, 2014 - ongoing - Brooks 2. Mar 1-Mar 15, 2015 Brooks 3. Nov 7 - ongoing - Brooks
Are messaging efforts aligned among organizations?	Analysis of message alignment	Same as above	Same as above	Degree of message alignment with the Office of Marijuana Coordination Communication Plan (results descriptive in nature) Overlap in messages b/w state agencies (results descriptive in nature)	Same as above	1. Nov 1, 2014 - ongoing - Brooks 2. Mar 1-Mar 15, 2015 - Brooks 3. Nov 7 - ongoing - Brooks

Appendix C: Retail Marijuana Education Program Logic Model



GOAL 2: Assess Effectiveness of CDPHE Collaboration and Support

