Twentieth Meeting of the HB 21-1317 Scientific Review Council

May 22, 2025





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Opening Remarks, Introductions and Welcome; Updates on Conflict of Interest

Christopher E. Urbina, MD, MPH Chair, HB 21-1317 Scientific Review Council







Scientific Review Council Members

Member	Role on Council	Affiliation(s)
Chris Urbina, MD, MPH (Chair)	Preventive medicine specialist (or preventive medicine public health professional)	Arapahoe Department of Public Health and Environment; Former Director of CDPHE
Gregory Kinney, PhD, MPH	Epidemiologist	Colorado School of Public Health
Kelly Knupp, MD	Physician familiar with the administration of medical marijuana pursuant to current state laws to those aged zero to seventeen	University of Colorado School of Medicine
Kennon Heard, MD	Medical Toxicologist	University of Colorado School of Medicine
Archana Shrestha, MD	Neurologist	University of Colorado School of Medicine
Erica Wymore, MD, MPH	Pediatrician, Neonatal-Perinatal Medicine	University of Colorado, School of Medicine
Paula Riggs, MD	Psychiatrist	University of Colorado, School of Medicine
Susan Calcaterra, MD, MPH	Internal medicine physician (or other specialist in adult medicine)	University of Colorado School of Medicine
Joseph Schacht, PhD	Licensed Substance Abuse Disorder Specialist	University of Colorado School of Medicine
Kent Hutchison, PhD	Neuropsychopharmacologist	University of Colorado School of Medicine
7 1 D 1 14D	Medical professional (or public health professional)	North Colorado Health Alliance; SummitStone

Cannabis Research & Policy Project Team Members

Member	Sub-Team
Lisa Bero, PhD	Systematic Review
Ashley Brooks-Russell, PhD, MPH	Subject Area Expertise
Meghan Buran, MPH	Administration
Annie Collier, PhD	Education Campaign
Jenn Leiferman, PhD	Education Campaign
Louis Leslie, BA	Systematic Review
Tianjing Li, MD, PhD, MHS	Systematic Review
Jean-Pierre Oberste, MPH	Systematic Review
Christi Piper, MLIS	Systematic Review
Thanitsara Rittiphairoj, MD, MPH	Systematic Review
Daphna Rubin, MPH	Education Campaign
Jonathan Samet, MD, MS	Administration
Neeloofar Soleimanpour, MPH	Administration
Greg Tung, PhD, MPH	Administration, Subject Area Expertise, Education Campaign
Sam Wang, MD	Subject Area Expertise

Review of Agenda

Christopher E. Urbina, MD, MPH Chair, HB 21-1317 Scientific Review Council







Scientific Review Council Meeting Agenda

2:30 PM	Opening Remarks, Introductions and Welcome, Updates on Conflict of Interest	Chris Urbina
2:35 PM	Review of Agenda and Meeting Minutes	Chris Urbina
2:40 PM	Project Funding and Leadership Team Updates • Additional focus on education and communication campaign	Cathy Bradley and Travis Leiker
3:00 PM	Thank You to Jon Samet	Cathy Bradley and Jon Samet
3:10 PM	Review Team Updates • Updated Scoping Review • Mental Health Review	Greg Tung and Tianjing Li
3:30 PM	Education Campaign Updates	Annie Collier
3:45 PM	Updates from Initium	James Corbett
4:00 PM	SRC Discussion, Next Steps & Closing Remarks	Chris Urbina

Review of Meeting Minutes

Christopher E. Urbina, MD, MPH Chair, HB 21-1317 Scientific Review Council

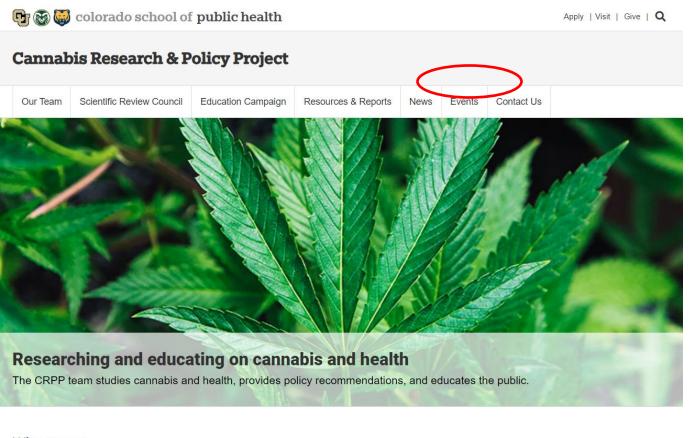






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Prior Reports & Meeting Materials Available





Who we are

The Cannabis Research & Policy Project team is a group of researchers from the Colorado School of Public Health and the University of Colorado Anschutz Medical Campus.

https://coloradosph.cuanschutz.edu/research-and-practice/practice/cannabis-research/resources

Project Funding and Leadership Team Updates

Cathy Bradley, PhD Professor & Dean, Colorado School of Public Health

Travis Leiker, MPA Assistant Dean of External Relations, Colorado School of Public Health







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Thank you, Jon!

Jonathan Samet, MD, MS Professor & Former Dean, Colorado School of Public Health







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Review Team Updates

Greg Tung, MPH PhD Tianjing Li, MD MHS PhD





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Articles Authors Subscriptions APHA Member Login **eBooks** Home Home » American Journal of Public Health (AJPH) » November 2024 Enhancing Methodological Approaches for Studying Health Effects of High-Previous Article Next Article **Concentration THC Products** Tianjing Li MD, PhD, MHS, George Sam Wang MD, Lisa Bero PhD, D Ashley Brooks-Russell PhD, MPH, Gregory TOOLS

Tung PhD, MPH, and Jonathan M. Samet MD, MS Accepted: May 06, 2024 Published Online: October 23, 2024

Abstract Full Text References

PDF/EPUB

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JOURNAL ARTICLE ACCEPTED MANUSCRIPT

Alerts

About ▼

Methodological challenges and actionable recommendations in studying the health effects of high-concentration THC products

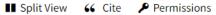
Tianjing Li, George Sam Wang, Ashley Brooks-Russell, Gregory Tung, Louis Leslie, Thanitsara Rittiphairoj, Jean-Pierre Oberste, Tsz Wing Yim, Lisa Bero, Jonathan M Samet 🔀

American Journal of Epidemiology, kwae421, https://doi.org/10.1093/aje/kwae421 Published: 29 October 2024 Article history ▼





Purchase











Abstract

In conducting a scoping review on the health effects of high-concentration cannabis products, we have uncovered pervasive methodological shortcomings within the cannabis literature. This paper begins by defining the 'causal effect' of interest for public health and delineating the desirable features of study design that can address crucial questions pertaining to public health and policy. We

Articles Authors Subscripti Home

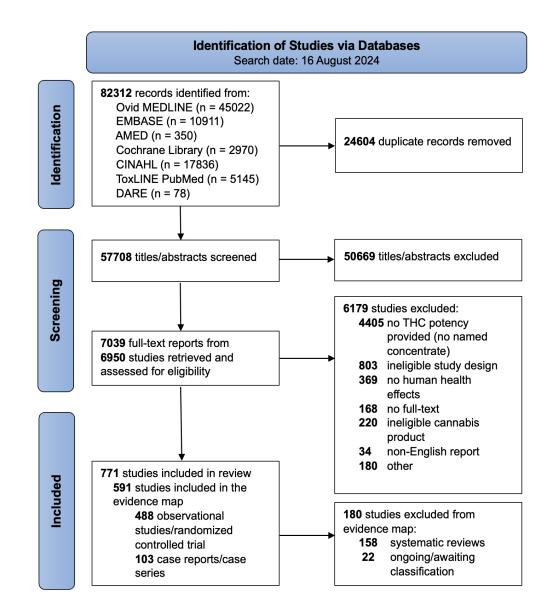
Home » American Journal of Public Health (AIPH) » December 2023

Health Effects of High-Concentration Cannabis Products: Scoping Review and **Evidence Map**

Lisa Bero PhD, Rosa Lawrence BA, Jean-Pierre Oberste BA, Tianjing Li MD, PhD, MHS, Louis Leslie BA, Thanitsara Rittiphairoj MD, MPH, Christi Piper MLIS, George Sam Wang MD, Ashley Brooks-Russell PhD, MPH, Tsz Wing Yim MPH, Gregory Tung PhD, MPH, and Jonathan M. Samet MD, MS

Accepted: August 14, 2023 Published Online: November 08, 2023

Scoping Review Studies



Forthcoming Publications

- Enhancing Methods for Research on Cannabis: A Workshop Report

- High-Concentration Cannabis Products and Mental Health Outcomes: A Systematic Review

Education Campaign

Annie Collier, PhD & Greg Tung, PhD







EDUCATION CAMPAIGN GOALS

- Promote informed decision-making about high concentration cannabis (HCC) through accessible, engaging, and culturally relevant content, combining personal stories and rigorous science
- Build a supportive community for open conversations about HCC risks
- Equip parents and mentors with tools to effectively discuss the risks of HCC for youth

- Use a straightforward yet empathic tone that avoids judgmental or alarmist language towards users
- Be transparent about the state of the research on HCC
- Ensure materials are appealing to diverse audiences

TARGET AUDIENCES

- Youth, young adults under 25, pregnant and parenting people
- Educate people about the harms associated with HCC
- Provide skills for family members to have discussions about cannabis concerns
- Provide healthy alternatives to cannabis use (coping)
- Reach urban/suburban, male and LGBTQ populations (highest users)
- Use creative and community driven approaches





Initium is a public benefit corporation committed to using innovation to improve human health.



In partnership with CoSPH, Initium Health has created and executed the campaign's branding, website, social media, digital and print strategies including all content.

Assets include videos, podcasts, webbased curricula, a chatbot as well as resources for parents, mentors, providers and people experiencing cannabis addiction.

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Project name Role & Person Project Lead: Greg and Annie+ THE TEA ON THE EDUCATION Sr. PRA: Daphna+ CAMPAIGN Contractor: Initium* Contractor: Sheana Bull Clinic Chat, LLC* Project Lead: Jenn Leiferman+ **Promoting Perinatal Wellness** PRA: Sarah Gelinas+ Difficult Conversations Project Lead: Annie Collier+ Project Lead: Annie Collier+ Biostatistician: Zach Giano+ Marketing Data: Trisha Lowe* Project Lead: Dannon Cox+ CU Liaison: Jenn L+

UNC/Youth mindfulness summit

AI/Chat bot on website

Project Lead: Clinic Chat, LLC* CU Liaison: Annie Collier+

HB 1317 EDUCATION CAMPAIGN AND INNOVATION PROJECTS ORGANIZATIONAL CHART

KEY:

Indicates Initium's involvement

+ Staff

*Contractor

EVALUATION TEAM

- Rigorous metrics collected across every component of the education campaign
 - CU collects quantitative and qualitative data (e.g., surveys)
 - Initium Health collects metrics on campaign awareness, engagement and impact (e.g., earned media, website traffic, how people look at the website)



All campaign decisions are data driven and inform our activities

Data also serves as basis for multiple publications

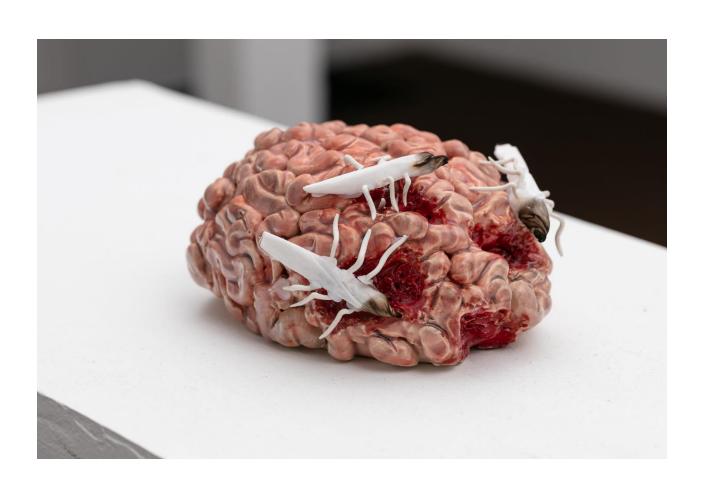
CINT Data Collection: Phase 1 (Completed)

- In Fall, 2024, data were collected via CINT, a market research platform that partners with opt-in survey panels
 - Participants were eligible if they were 18+ and current residents of Colorado
 - Residency was verified using both geolocated IP address and self-reported zip code
 - Oversampling was used to include more individuals who were racial/ethnic minorities, non-heterosexual, or pregnant/parenting children under age 2
 - Final sample included 564 participants who completed at least 80% of the 58-item online survey

CINT Data Collection: Phase 2 (Underway)

- 2nd round of data collection through CINT with 3-pronged approach:
 - Recontacted survey participants from Survey 1 (as of now, n = 55)
 - Augment survey participants (new) from the general Colorado population to approach n = 564 (Phase 1), depending on how many people from original sample complete second survey. May not be necessary
 - Survey new participants, known to be exposed to campaign messages through ads and social media

Three Health Education Publications Underway



1. Profile of HCC Users

Title: Understanding the Profile of High Concentration Cannabis (HCC) Users

Authors: Zachary Giano and team

Study Questions: Describe the use of HCC in a cross-sectional sample of people living in Colorado, the first state to legalize cannabis. Examine demographic differences **between non-users**, **current cannabis users**, **and HCC** users.

Key Findings:

- **HCC users were younger** (average age = 35.5) compared to cannabis users (41.3) and non-users (42.7)
- *54.7% of HCC users identified as male, compared to 38.9% of non-users
- **32.4% of HCC users identified as non-heterosexual**, significantly higher than both cannabis users (16.3%) and non-users (14.0%)
- **Among HCC users, 10.4% were pregnant,** compared to 3.9% of non-HCC cannabis users, suggesting that pregnant individuals may be more likely to use high-concentration cannabis products.

2. Pregnancy and HCC Use

Title: Cannabis and Early Parenthood: Use, Knowledge, and Attitudes.

Authors: Jenn Leiferman and team

Main Hypothesis: Cannabis use, knowledge, and attitudes would differ between parents who were pregnant or had children under 2 years old compared to parents with children over 2 years old.

Key Findings:

- A greater percentage of parents who were pregnant or had children under 2 years old reported current **high** concentration cannabis (HCC) use than parents with children over 2 (22.4% vs 14.1%)
- Parents who are pregnant or have children under 2 years old were significantly lower in their knowledge of HCC overall, especially related to the harmful health/social effects of HCC use when pregnant compared to parents with children over 2 years old (46.1% vs 67.2%)
- Parents who are pregnant or have children under 2 years old were significantly **less confident in their ability to refuse cannabis** (67.1% vs 81.5%) or choose another option (66.7% vs 82.6%) compared to parents with children over 2 years old
- Only just over half (58%) of all parents felt confident in discussing HCC with others

3. Impact of an Art Exhibition on Viewer Knowledge About HCC

Title: Hear/Say: Demonstrating the Impact of an Art Exhibition on Viewer Knowledge about the of High Concentration Cannabis

Authors: Annie Collier and team

Study Questions: How well does a science-informed art exhibition educate the public about HCC? Which artwork was most effective, and how can we best train artists to create artwork that has a public health impact?

Key Findings:

- Exhibition **patrons reported that they gained significant knowledge about HCC**, as compared with their knowledge prior to attending the exhibition. When compared to a general sample of people in Colorado, art patrons knew significantly more about HCC products and health impacts than the general public.
- Artists that incorporated information about HCC into both their artworks and artists statements and purposefully
 provoked an emotional response in viewers sparked the greatest critical thinking about HCC, imparted the most
 knowledge, and expressed the greatest meaning to viewers. Although other artworks were rated as aesthetically
 appealing, novel and liked, they conveyed less information about HCC.

Future Directions

- Continue contract with Initium
- Colorado School of Public Health Partnerships
 - Expand work with selective partnerships
 - Develop new partnerships and materials
- Publish additional Education Campaign papers this summer:
 - "Latent Profile Analysis" that will investigate groups or profiles of HCC users
 - "Propensity Score Matching" paper that will match similar HCC and non-HCC users
 - "Program Development: Creating a Health Education Campaign on High Concentration Cannabis"
 - "Changes in Knowledge about HCC in People Exposed to the 'Tea on THC' Campaign"
- QUESTION FOR SRC: Should we begin to develop campaign materials for the following groups:
 - LGBTQ+ people
 - 65+ yo people

Updates from Initium Health

James Corbett, MDiv, JD Initium Health





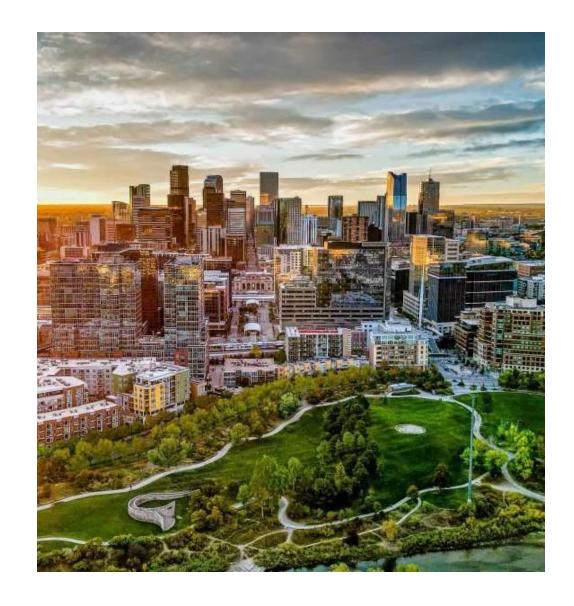
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Overview

- 1. Industry Entries/ Awards
- 2. Data Driven Campaign Optimization
- 3. Campaign Workstreams
- 4. Outcomes



Industry Entries/ Awards

MUSE

CREATIVE AWARDS—Integrated Marketing Campaign

























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2025 MediaPosts Planning & Buying Awards Finalist for Public Service





Addiction: The Next Step - The Gibbons Family Story by OpAD Media Solutions, LLC. for New York State Office of Addiction Services & Supports

The Tea on THC by Initium Health for Colorado School of Public Health

ONLY FIVE by OMD Dominicana for FARMACIA CAROL



















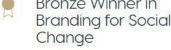


3 INTERNATIONAL DESIGN AWARDS—Branding, Poster & Brochure Design, Media/Moving Image for Social Change



Silver Winner in Poster and Brochure Design for Social Change

Silver Winner in Mix Media/Moving Image for Social Change



Branding

GET THE FACTS. theteaonthc.org

The Tea on THC Initium Health

Poster & Brochure Design



Groundbreaking art exhibition exploring the risks of highconcentration cannabis: Hear/Say & GrowUp

Mixed Media/Moving Image



Former NFL Receiver Brandon Lloyd Catches Good Health After **Dropping Cannabis**

Initium Health

















APHA 2025 Abstract Submissions

Abstract #1:

Title: "Science-Informed Public Education Campaign About High Concentration Cannabis"

Focus: Scientific review of literature and evidence informing the campaign development

Authors: Gregory Tung, Ann Futterman Collier

Format: Oral Presentation (ATOD category)

Abstract #2:

Title: "Developing & Evaluating Public **Education Campaigns on High-Concentration** Cannabis"

Focus: Framework for designing and evaluating the campaign; marketing approach and metrics

Authors: James Corbett, Gregory Tung, Ann **Futterman Collier**

Format: Oral Presentation (ATOD category)

Timeline

- March 28, 2025: Both abstracts submitted by deadline
- April 28, 2025: Current status waiting for review
- June 3, 2025: Expected Notification date



APHA Public Health Film Festival / APHA's 2025 Annual Meeting and Expo:

Devastating: Students describe the chaos of high concentration cannabis use NFL Alum Brandon Lloyd Catches Good Health After Dropping Cannabis The Breaking Point: A life lost to THC



CPHA Conference / Keystone Sept 9 - 11

Maternal, Child, Adolescent and Family Health

Chronic Disease, Injury Prevention, & Behavioral Health Promotion



Target AudiencesTotal CO Population ~5.96M; Target ~3.5M



Youth (11-17)

Audience Size: ~520k

Non-Hispanic, White: 55.1%
| Black: 4.3% | American
Indian or Alaska Native: 0.5%
| Asian: 3.2% | Hispanic or
Latino: 32.1% | Native
Hawaiian and Other Pacific
Islander: 0.2%



Young Adults (18-25)

Audience Size: ~613k



Pregnant Women

Audience Size: ~65k*

Hispanic: 30% | White: 56.8% | Black: 4.8% |

Asian/Pacific Islander: 4.4% | American Indian/Alaska

Native: 0.5%



Parents & Mentors

Audience Size: 2.3M

School Counselors:

~3,177

Coaches: ~2,900

Teachers: ~55,358

Households: 2.278M

Data-Driven Campaign Optimization





Is your teen dabbing? Get the facts on high concentration cannabis.



Meta



Is your teen dabbing? Get the facts on high concentration cannabis.



Meta



Your brain develops until 25. Get the facts on high concentration cannabis.



Meta



Your brain develops until 25. Get the facts on high concentration cannabis.



1.99% CTR Benchmark: 0.50% 1.40% CTR Benchmark: 0.50% 0.54% CTR Benchmark: 0.50% 0.29% CTR Benchmark: 0.50%









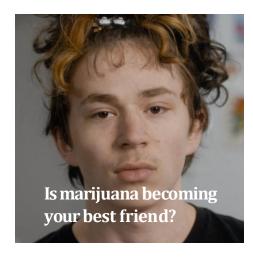
CTR: 0.47% Benchmark: 0.50% CTR: 0.56% Benchmark: 0.50%

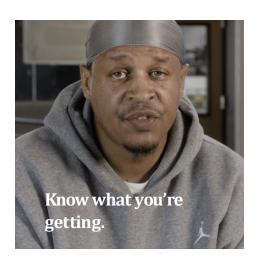


TikTok



TikTok





CTR: 0.47% Benchmark: 0.27%

CTR: 0.15% Benchmark: 0.27%











12.64% CTR **Benchmark:** 0.90%



12.51% CTR **Benchmark:** 0.90%



Display



15.14% CTR **Benchmark:** 0.90%



Meta | English



Meta | Spanish



Display |English



Display |Spanish











CTR: 10.61% **Benchmark:** 0.90%

CTR: 6.80% **Benchmark:** 0.90%

CTR: 1.99% **Benchmark:** 0.50%

CTR: 1.40% **Benchmark:** 0.50%

CTR: 0.58% Benchmark: 0.50%

Is marijuana becoming your best friend?

Powered by the Colorado School of Public Health







If you use, baby uses.

GET THE FACTS

theteaonthc.org







Some get high; some get lost.

THC can increase psychosis risk.

GET THE FACTS

theteaonthc.org







Is your teen dabbing?

A third of teen cannabis users are using high concentration dabs.

GET THE FACTS

theteaonthc.org





TIPS FOR TALKING TO TEENS ABOUT CANNABIS: Start early: Stay calm: Keep Introduce topics emotions in check for before they open dialogue. encounter them. Communicate your Understand their reasons. Listen to concerns. Express their views and worries clearly and calmly. experiences.

Stick to the facts:

inform them.

Use reliable sources to

Keep it two-way.

Encourage them to

share their thoughts.













...Carton Ext. mage tips on communication with youth. Visit out #his hob can you do you have any body who's 18+ and eligible to work in New Hampshire. It will greatly expand the behavioral health workforce.

#hashtag #loremipsum



Out of Home Advertising

Billboards



Digital Kiosks

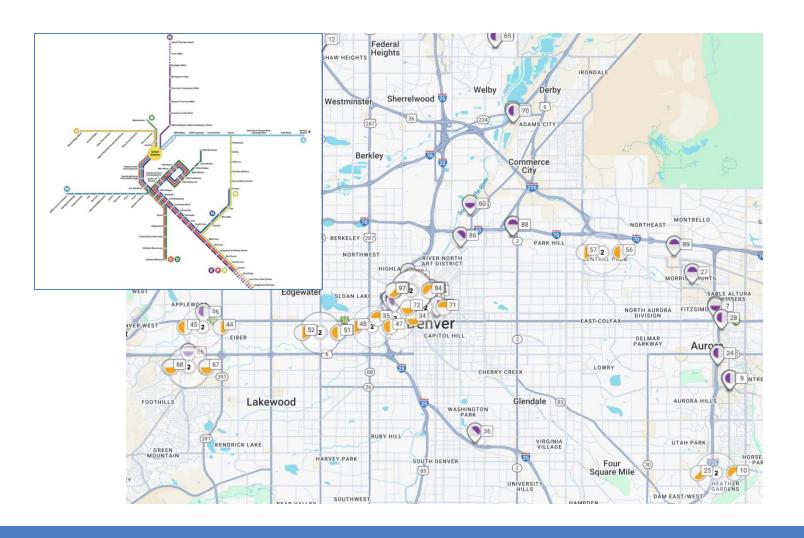








Digital Kiosks: 110 Locations





Concrete Graphics

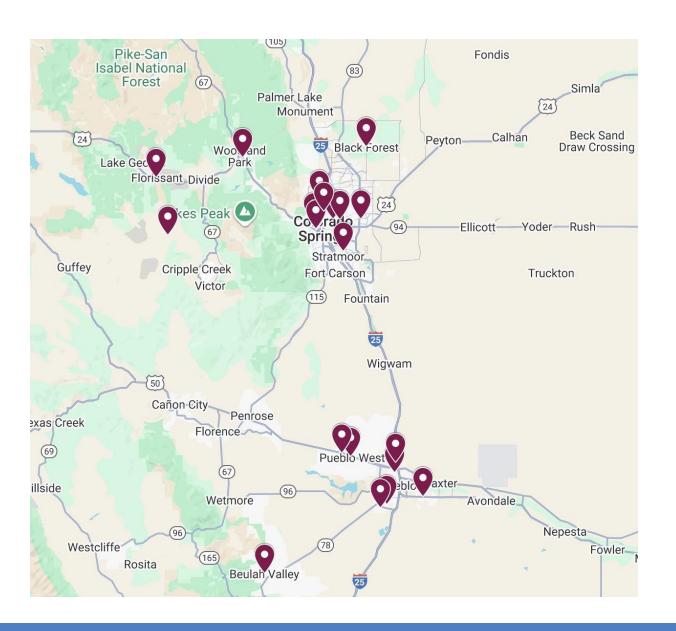






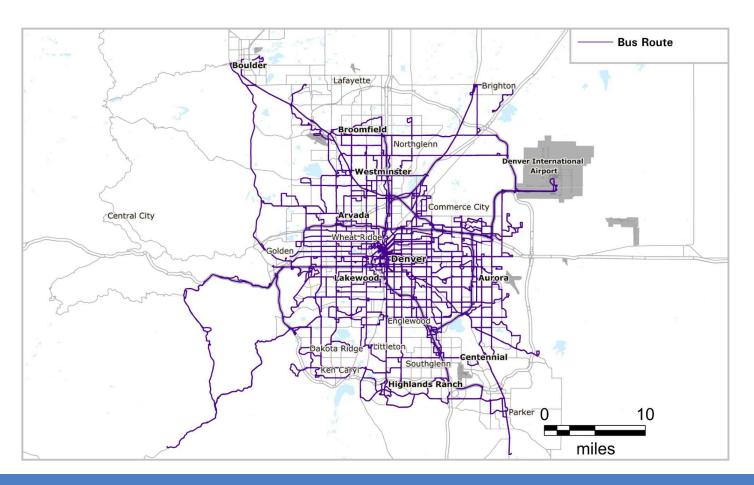


Concrete Graphics



Bus Tails

Denver



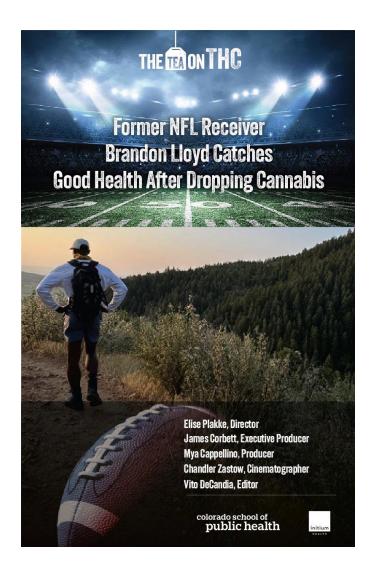


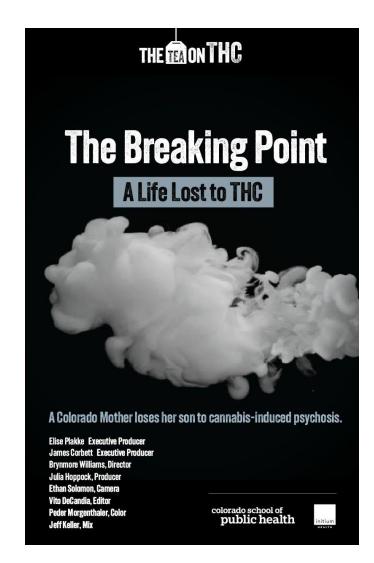
Videography













Educational Tools







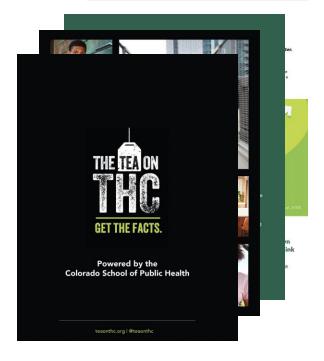






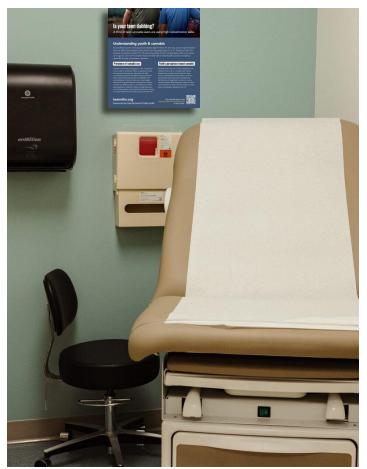
















Community Outreach/ Events









Outside Festival |05/31/2025 - 06/01-2025



Outside Festival deemed a success with 18,000 attendees helping forge a model for a new national outdoor recreation gathering

With business, concerts, films, panels and outdoor gear brands, organizers hope the inaugural Outside Festival becomes a mustattend event for the outdoor recreation industry

Denver PrideFest |06/14/2025 - 06/15/2025





Swag here

















Outcomes

KPI	Original Target	Current	Forecast through June	Status
Awareness: Impressions	35M Impressions	26,250,442	35M	On track
Awareness: Earned Media & PR	KOA Colorado & Colorado Public Radio, Denver Gazette, Colorado Sun, CBS Colorado	KOA Colorado & Colorado Public Radio, Denver Gazette, Colorado Sun, CBS Colorado + MG Magazine, MSN, 9News.	NA	Exceeded goal
Engagement: Website Traffic	15,000 monthly users (after ramp)	Jan'25: 9,040 Feb'25: 9,855 Mar'25: 17,648 Apr'25: 15,706	15,000+ monthly users	Exceeding goal
Engagement: Community Outreach	1,000 Potential Partners Reached 10 Events Hosted 10 Partnerships Established	1,002 Reached 8 Events Hosted 13 Partnerships Established	1,500 Reached 10 Events Hosted 13 Partnerships Established	Exceeding goal
Impact: Sufficient sampling for surveys	N = 500 (w/ detailed quotas)	Pre-survey N = 564	Post-wave currently running	Exceeded goal



Thank You

SRC Discussion

Christopher E. Urbina, MD, MPH Chair, HB 21-1317 Scientific Review Council







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Cannabis Research & Policy Project

Next Steps & Closing Remarks

Christopher E. Urbina, MD, MPH Chair, HB 21-1317 Scientific Review Council





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