Fifth Meeting of the
HB 21-1317 Scientific Review Council

June 8, 2022

colorado school of public health

Cannabis Research & Policy Project

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

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

colorado school of **public health**

Cannabis Research & Policy Project

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
Neeloo Soleimanpour, MPH	Administration
Rosa Lawrence, BA	Systematic Review
Louis Leslie, BA	Systematic Review
Tianjing Li, MD, PhD, MHS	Systematic Review
Christi Piper, MLIS	Systematic Review
Thanitsara Rittiphairoj, MD, MPH	Systematic Review
Jean-Pierre Oberste, BA	Systematic Review
Jonathan Samet, MD, MS	Administration
Greg Tung, PhD, MPH	Administration, Subject Area Expertise
Sam Wang, MD	Subject Area Expertise

Scientific Review Council Members

Member	Role on Council	Affiliation(s)
Chris Urbina, MD, MPH (Chair)	Preventive medicine specialist (or preventive medicine public health professional)	Pueblo Department of Public Health and Environment; Former Director of CDPHE
Gregory Kinney, PhD, MPH	Epidemiologist	Colorado School of Public Health
David Brumbaugh, MD, MSc	Physician familiar with the administration of medical marijuana pursuant to current state laws to those aged zero to seventeen	Children's Hospital Colorado; 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	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
Lesley Brooks, MD	Medical professional (or public health professional) who specializes in racial and health disparities and systemic inequalities in health care and medicine	North Colorado Health Alliance; SummitStone Health Partners

Review of Agenda

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

colorado school of public health

Cannabis Research & Policy Project

Scientific Review Council Meeting Agenda

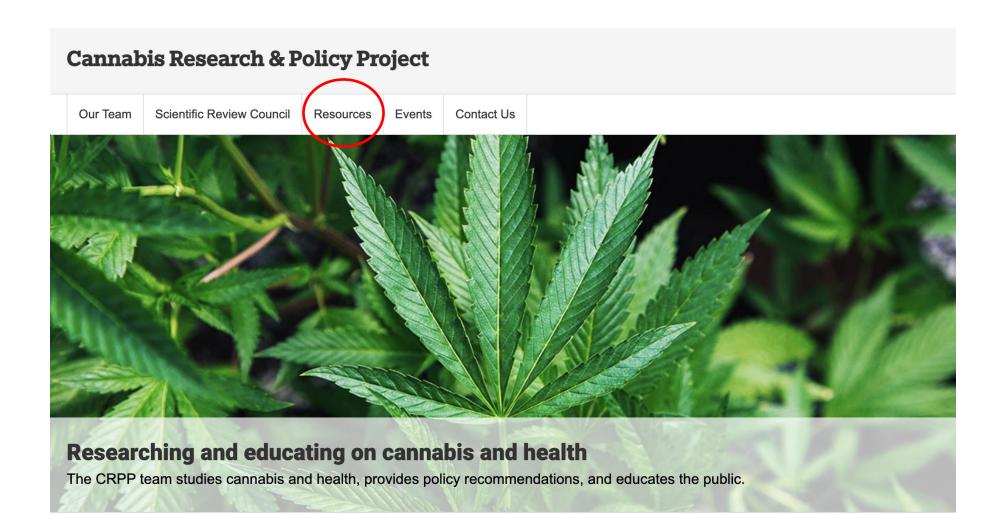|		
12:00 pm	Opening Remarks, Introductions and Welcome, Updates on Conflict of Interest	Chris Urbina
12:10 pm	Review of Agenda and Meeting Minutes (05/25/22)	Chris Urbina
12:15 pm	Update on Progress of Review & Instructions on SRC Dashboard	Tianjing Li & Rosa Lawrence & Chris Urbina
12:25 pm	Questions for SRC Consideration	Chris Urbina
1:00 pm	SRC Discussion of General Plan and Draft Report	Jon Samet & Chris Urbina
1:50 pm	Next Meeting on June 15th and Closing Remarks	Chris Urbina & Jon Samet

Review of Meeting Minutes and Response to SRC Recommendations

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

colorado school of **public health**

Cannabis Research & Policy Project

Cannabis Research & Policy Project

Our Team Scientific Review Council Resources Events Contact Us

Researching and educating on cannabis and health

The CRPP team studies cannabis and health, provides policy recommendations, and educates the public.

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.

Review of HB 1317 Expectations

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

colorado school of public health

Cannabis Research & Policy Project

Charge to the
Colorado School of Public Health

colorado school of public health

Cannabis Research & Policy Project

Tasks for the Colorado School of Public Health in HB 21-1317

- Conduct a systematic review of high-potency THC marijuana

- Establish a Scientific Review Council

- Produce a public education campaign

High-Potency THC Marijuana and Marijuana Concentrate Research

- Conduct a systematic review of high-potency THC marijuana:
  - Systematically curate and synthesize the evidence regarding possible physical and mental health effects
  - Identify needed research
    - Report on gaps identified by 1/31/2022 and what needed to address the gaps, including funding and timeline for new studies
- <mark>Provide initial report by 7/1/2022</mark>
- Potentially conduct additional research
- The research must be conducted independently without any predetermined outcomes or undue influence from any party

Systematic Scoping Review

Cannabis Research & Policy Project

What type of systematic review?
Per House Bill 21-1317

- "...all available scientific evidence-based research regarding the possible physical and mental health effects of high-potency THC marijuana and marijuana concentrates regardless of the location of the research."

- "The research must systematically curate and synthesize existing research, identify evidence gaps, and identify new research that is needed to better understand the health implications of high-potency THC marijuana products and the specific THC potency levels and amounts at which various health concerns arise."

Research Questions for the Review

- Identify and describe studies that explore the relationship of high-potency cannabis products with **beneficial** and **adverse** health outcomes

- Identify and describe studies that report adverse effects of exposure to high-potency products (with no comparison group)

Update on Progress of Review

Tianjing Li, MD, PhD, MHS
Associate Professor, School of Medicine

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

colorado school of public health

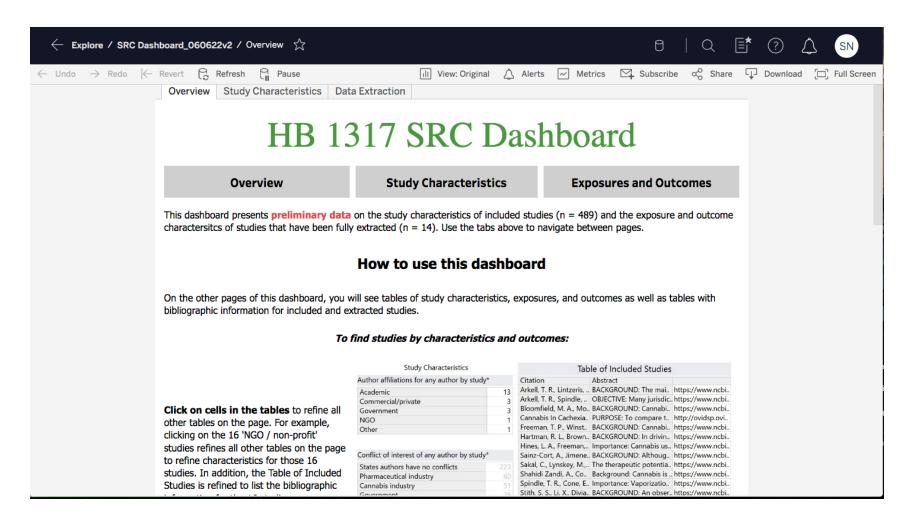**Cannabis Research & Policy Project**

Updates from Cannabis Research & Policy Project

- Data Extraction
  - Newly trained students and team members
  - Expect pace to increase exponentially
- Interactive Dashboard available to SRC members

Instructions on SRC Dashboard:

- https://viz.cu.edu/t/University/views/SRCDashboard_060622v2/Overview?:showAppBanner=false&:display_count=n&:showVizHome=n&:origin=viz_share_link

Questions for SRC Consideration

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

colorado school of public health

Cannabis Research & Policy Project

Prompt #1:

- Given the information extracted, do we have enough to make **recommendations** about the impact of high potency THC on **children, pregnant women, communities of color, LBTGQ+ and other populations** (health equity impact)?
    - If yes, what can be said?
    - If no, then does this insight become a recommendation as a gap and opportunity for future research or policy?
- Do we want to call out other populations subgroups where data are **missing**?

Prompt #2:

- Given the data extraction of the most useful studies, do we have **enough information to make recommendations** of observed outcomes (beneficial/adverse)?
  - If yes, how do we present that information?
  - If no, is the dashboard our only option?
    - Do these become gaps and opportunities for future research or policy?
- What about the **secondary effects**?
  - i.e. memory loss, reaction time

Prompt #3:

- Can we imagine an **"ideal" study/ studies** to answer the research question?

- What would be the **design attributes** of these studies?
  - For example, how should potency be defined and measured?

- What are the most important **outcomes**?

- Comments on the **relation of dose to benefit / adverse effects** of same outcome.

Prompt #3 Continued:

- How does the benefit / adverse effect of **same outcome** vary by context or characteristics of the person exposed?

- Do we want to <u>spend some time</u> thinking about what the **"ideal" study** would be to assess different questions?
  - i.e. a question of harm in youth users vs a question of benefit / treatment for a population with a certain clinical condition?

Prompt #4:

- How do we describe the **impact of THC potency** when there are **other variables** *(quantity, frequency, route of administration, tolerance, or chronic use)* that **impact dosage**?

- How do we describe the **heterogeneity** of definition of **potency**?

- Do we need to clarify these definitions as a **gap** and make a standardize metric **recommendation of potency** for future research and future policy?

- What are the **factors** that may alter the association b**etween high potency THC products and health outcomes**?
  - For example, naïve users vs. frequent/chronic users; men vs. women; or any other characteristics.

Prompt #5:

- Is there a **difference** in the type of evidence needed for **benefit vs. negative effect**?

- Should we be following the FDA guidelines for benefit?
  - The WHO's evidence to decision framework comprises six substantive criteria—*balance of health benefits and harms*, *human rights and sociocultural acceptability*, *health equity, equality and non-discrimination*, *societal implications*, *financial and economic considerations*, and *feasibility and health system considerations*—and the meta-criterion *quality of evidence*.

- Will such a framework be **useful** for SRC in making recommendations?

SRC Discussion of General Plan and Overview of the Draft Report

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

Jonathan M. Samet, MD, MS
Dean, Colorado School of Public Health

colorado school of public health

Cannabis Research & Policy Project

Background on Systematic Review and Scoping Review

- Is the description provided sufficient?
- Excerpt:
  - *House Bill 21-1317 called on the Colorado School of Public Health specifically to carry out a systematic review. A systematic review attempts to identify, appraise, and synthesize all available evidence that meets pre-specified eligible criteria to answer a specific research question. A systematic review may or may not include a meta-analysis, which is the quantitative synthesis of the results from multiple independent studies. Scoping reviews are helpful precursors of systematic reviews because they map the literature on a particular topic or research area and provide an opportunity to identify key concepts, gaps in the research, and types and sources of evidence to inform practice, policymaking, and future research.*

Considerations Related to Strength of Evidence and Decision – Making

- Any comments on the description provided and the background for legislators?

- Excerpt:

  - *To reiterate an element of the charge to the ColoradoSPH in HB 1317: "The research must systematically curate and synthesize existing research, identify evidence gaps, and identify new research that is needed to better understand the health implications of high-potency THC marijuana products and the specific THC potency levels and amounts at which various health concerns arise." The findings related to the health implications and THC potency and levels at which effects occur have potential regulatory implications as well as guiding the content of the educational campaign...*

Theoretical Framework for How Potency is Related to Health Effects

- Any feedback on the written description on important conceptual issues and definitions?

- Excerpt:

  - *The ColoradoSPH was charged with addressing high-potency THC cannabis products and concentrates. As with other efforts to assess the effects of using high-potency products, e.g., the Colorado Department of Public Health and Environment (CDPHE), the review team interpreted its charge as considering how effects (whether harms or benefits) depend on the concentration of THC in the product used. In pharmacological terms, potency is defined by the U.S. Food and Drug Administration (FDA) as: "The specific ability or capacity of the product, as indicated by appropriate laboratory tests or by adequately controlled clinical data obtained through the administration of the product in the manner intended, to effect a given result."...*

SRC Plans and Approach

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

Jonathan M. Samet, MD, MS
Dean, Colorado School of Public Health

colorado school of public health

Cannabis Research & Policy Project