**Meeting Minutes**

**HB 21-1317 Fourteenth Meeting of the Scientific Review Council**

**February 26, 2024; 9:30 am – 11:00 am MT**

**General Remarks and Welcome:**

* Dr. Chris Urbina, Chair of the Scientific Review Council (SRC), called to order the fourteenth meeting of the SRC on February 26, 2024, at 9:30 am MT.

**Scientific Review Council Introductions and Update on Conflicts of Interest:**

* The Chair conducted a roll call for both the Council and the Colorado School of Public Health (SPH) project team members.
* The following Council members were present and introduced:
* Chris Urbina
* Joseph Schacht
* Kennon Heard
* Greg Kinney
* Susan Calcaterra
* Paula Riggs
* Kelly Knupp
* Erica Wymore
* The following Council members were absent:
* Lesley Brooks, with advanced notice and apologies
* Archana Shrestha, with advanced notice and apologies
* Kent Hutchison, with advanced notice and apologies

The following SPH team members were present and introduced:

* Jonathan Samet
* Lisa Bero (with advanced notice of early exit)
* Greg Tung
* Sam Wang
* Tianjing Li
* Ashley Brooks-Russell (with advanced notice of late arrival)
* Louis Leslie
* Jean-Pierre Oberste
* Valerie Yim
* Meghan Buran
* Neeloo Soleimanpour
* Annie Collier
* Colleen Keenan
* The following SPH team members were absent:
* Christi Piper, with advanced notice and apologies
* Sheana Bull, with advanced notice and apologies
* Paige Buchanan-Hall, with advanced notice and apologies
* Thanitsara Rittiphairoj, with advanced notice and apologies
* Jenn Leiferman, with advanced notice and apologies
* Charlene Barrientos Ortiz, with advanced notice and apologies
* Changes to COI forms for any Council members

No questions for Chair Chris Urbina.

**Review of Agenda, Meeting Minutes, Charge to the Colorado SPH, and Recommendations to the SRC:**

* Chair Urbina reminded everyone in attendance that meeting minutes and the response to SRC recommendations are available on the project website under the resources tab.
* Chair Urbina reviewed the agenda with the Council.
* Agenda shown on screen for the panelists (Council and Colorado SPH) as well as public attendees.

No questions for Chair Urbina.

**Overview Progress from the Cannabis Research & Policy Project:**

* Dr. Jonathan Samet notes that the end of the fiscal year is looming. The team has a slate of activities underway, and we have some new activities under development. We are making certain that we use the funds we have been provided this fiscal year for projects related to the educational campaign which comprises of a diverse group of activities intended to reach different target groups. We plan to provide an update since the last meeting and describe activities that we need the SRC to review. Our goal for today is to give the SRC an update, talk to the SRC about what is coming, and what is new.
* Dr. Greg Tung reminded the group of how the Cannabis Research & Policy Project is internally organized. The project is broken into three cores: administrative, research, and educational campaign cores that are all overseen and advised by the SRC. Dr. Tung provided a progress update that involved cross collaboration between the project cores.
* Dr. Tung highlighted the development of a newsletter and project timeline that will be uploaded to our website where updates will take place regularly as we have more external facing products, we want those who are interested informed with the project’s progress.
* Dr. Tung described the methods workshop we are planning, in addition to the scheduled continuing medical education event that is targeted at pediatric and OBGYN providers, and the collaborative relationship we are building with the department of psychiatry at the University of Colorado School of Medicine to plan additional educational activities.
* Dr. Tung also provided a high-level overview of ongoing reports that the cannabis research and policy team has under development including the update of our overall scoping review and systematic reviews on mass media and behavioral interventions and modern modalities in behavioral interventions, which will be a resource for our communication and education team as they continue to build out our educational activities. Dr. Tung mentioned that the team also has reviews in progress relating to mental health outcomes and respiratory health outcomes.
* Dr. Tung previewed the policy paper and the team’s effort to focus on policy translation where we are taking the next step from all the review activities and thinking about what the policy recommendation implications of that are. The last report we have under development focuses on funding bias and understanding the implications of the current state of research.
* Dr. Tung mentioned that Dr. Annie Collier will provide greater detailed updates from the educational campaign team. Dr. Tung brought attention to what has taken place since our last meeting in December, specifically relating to the partnership formed with Colorado State University to focus on reaching college-age young adults, the partnership formed with University of Northern Colorado around mindfulness training and peer education in relation to high-concentration products, and the partnership formed with mHealth lab in the Department of Community & Behavioral Health at the Colorado School of Public Health (CoSPH), which is centered around developing artificial intelligence and chatbots to deliver some of the content and messaging developed by the educational campaign team. The team has also reached out to experts at CoSPH to develop motivational interviewing training and content (e.g., how parents can talk to their children, how peers talk to one another). Dr. Tung emphasized the relationship we are developing with the department of psychiatry to produce provider education and communication material in addition to providing more community activities.
* Dr. Tung also explained that the team is working on a methods workshop to address the concern about the quality of studies and the consistency issues in the methods that are used in the research. The idea is to bring together institutions and individuals that are involved in cannabis research to develop more consistent standards that is more relevant to the current use pattern and current marketplace. The general timeline for this workshop is to take place this Spring, 2024.
* Dr. Samet stated that we are planning this as a working meeting. Planning committee members come from the National Institute for Drug Abuse (NIDA) and the research and surveillance communities within the cannabis field. We are hoping to produce a report with recommendations that will help advance research and surveillance and make them mutually better aligned, especially with what is available in the marketplace.

Questions and Answers:

* Chair Urbina asked if there are any questions regarding the workshop on Advancing Methods in Cannabis Research.
	+ Dr. Susan Calcaterra asked who will be invited to attend the workshop.
	+ Dr. Samet answered that the planning committee has identified areas of expertise that we want to cover while keeping the meeting size in the range of 20 individuals. We will have 1-2 individuals join from each key discipline we want to represent (e.g., toxicology, survey design, surveillance, research).
* Dr. Joseph Schacht asked who in the Department of Psychiatry the research team is collaborating with.
	+ Dr. Greg Tung mentioned that we are collaborating with Dr. Matt Mishkind.
	+ Dr. Schacht suggested reaching out to Dr. Chad Morris from the behavior wellness program who specializes with motivational interviewing for community-based training programs. He has mainly done work in tobacco cessation, but it may be a good fit for this as well.
* Dr. Kelly Knupp asked where the material developed from the methods workshop will be housed and will the material be published. How will the research team make it known to the public that this is available, so researchers are aware of what the standards and recommendations are to improve their research?
	+ Dr. Samet mentioned that we plan to publish through a peer-reviewed journal and make the product from the workshop publicly available. We hope that NIDA will also disseminate the product from the workshop. Dr. Samet noted that we hope to reach those who are in the surveillance realm, and we have some who work in this area that we plan to invite to the workshop. Dr. Samet emphasized the plan to disseminate the workshop product through multiple channels.
* Dr. Paula Riggs mentioned that the scoping review identified many research gaps, asked if a representative from the Cannabis Research Center of Excellence within the Department of Psychiatry on the Anschutz Medical Campus will be invited to join because that is the goal of the research center.
	+ Dr. Samet acknowledged Dr. Riggs’ comment and mentioned that a representative from the center will be invited.
* Dr. Tung returned to the presentation and mentioned the continuing medical education event scheduled in collaboration with Children’s Hospital for Pediatric & OBGYN providers. The intent is to educate providers on the background on cannabis pharmacology, current market, landscape risk, communication and the current state of the evidence from our scoping review. The event is scheduled for May 15, 2024, on the Anschutz Medical Campus.

No further questions for Drs. Samet or Tung.

**Reviews in Progress:**

* Dr. Tianjing Li provided an update on the ongoing reviews in progress. There are four reviews taking place at present: updating the overall scoping review, high-concentration cannabis products and mental health outcome review, mass media behavioral intervention review, and modern modalities in behavioral interventions review.
* Dr. Li mentioned that we are updating our scoping review and we plan to update it annually. The initial scoping review findings were also published in the American Journal of Public Health. The initial scoping review included 452 studies that met the criteria. The most recent literature search conducted in October 2023, identified almost 10,000 new records to screen. The methodologists are working to screen the studies for inclusion currently. We will then update the tableau data dashboard after data extraction and screening is completed.
* Dr. Li noted that from the initial scoping review findings, one recommendation was to pursue a systematic review on the mental health outcomes. From the 452 studies identified in the scoping review, we are including 102 records in this systematic review for the mental health outcomes. We are in the process of extracting all the data, verifying, and performing the synthesis. We hope to have a draft report developed by the end of March.
* Dr. Li discussed the additional two systematic reviews taking place. The first review is focused on an overview of systematic reviews on mass media and behavioral interventions. Of the 2028 studies that were included, 12 studies were rated as higher quality and will be synthesized. Conclusions from the findings are still in progress.
* Dr. Li provided the status on the other review that is focused on modern modalities for communications which will inform the educational campaign. The search was comprehensive with 1400 studies identified and over 400 studies included. Nearly 300 studies were randomized controlled trials and 137 systematic reviews were identified. The methodologists have completed data extraction and are in the process of writing the manuscript.
* Dr. Li provided a flowchart (PRISMA diagram) for each review to scope the literature considered.

Questions, Comments, and Answers

* Chari Urbina asked if the dashboard would be continuously updated and accessible to the public.
	+ Dr. Li agreed and mentioned the dashboard will be updated as the screening and extraction efforts are completed.

No further questions for Dr. Li.

**Policy Paper**

* Dr. Samet discussed the reasoning for developing a policy paper, largely due to the limited evidence on the effects of high-concentration cannabis product use as noted in our report on the findings of the scoping review and the serious limitations in the literature. We are trying to address the limitations through the workshop that Dr. Tung mentioned earlier. Previously, the Cannabis Research & Policy Team did not offer specific evidence-based policy recommendations because the evidence was so limited as to not support specific recommendations. This paper was developed as a result of the limited set of findings from the scoping review. Dr. Samet hopes that this paper will fill the gap and provide recommendations for potential next steps. Per the language of HB 1317, the research team can offer recommendations regarding appropriate regulatory measures and in hopes it might reduce any adverse consequences of having higher concentration products in the marketplace.
* Dr. Samet provided a broad outline of the policy paper including the target populations who we believe to be potentially susceptible and vulnerable to adverse effects. Dr. Samet acknowledged our collaboration with the National Conference of State Legislatures who developed a policy mapping of what is occurring throughout the country. The findings were useful for context framing in the paper. Given the uncertainty of the evidence, we advised taking a precautionary policy approach particularly around the fetus, children, youth, and young adults.
* Dr. Samet mentioned that we asked the SRC to provide their comments to the paper, but SRC can make their own recommendations too. Our intent is to post this paper on our website to complement the report we have already published.

Questions, Comments, and Answers

* Dr. Calcaterra said the policy paper is well written and noted that it would help to provide a definition table to define the various terms used throughout the paper. In addition, Dr. Calcaterra asked if we can make more definitive statements regarding the statement on shifting sales towards lower concentration products. Can we offer a clear, powerful concentration cut off and or advise halting sales of some products? Also, Dr. Calcaterra suggested bolding the statement “the precautionary principle requires that the burden of proof lies in establishing safety not risk”.
	+ Dr. Samet acknowledged the desire to make more specific cut-off within the policy paper. Dr. Samet mentioned that the literature does not support a particular concentration as acceptable. Dr. Samet recognizes that there are products with high amounts of THC in the marketplace, but the challenge we are facing is how to reach any conclusion on a cut-off while using an evidenced-based approach.
	+ Dr. Sam Wang emphasized the lack of evidence around a threshold. There was no clear answer on how to approach cut-off statements.
	+ Dr. Samet mentioned that we can make a comment that perhaps the evidence will lead to more specific conclusions as research and evidence accumulate in the future.
	+ Dr. Tung appreciated the question and discussion. The SRC’s role allows them to advise the research team and suggest making stronger recommendations. The SRC can also make their own recommendations. This was a difficult area for the research team to navigate, so our intent given the objectives and current state of the research, we will follow a precautionary approach and lay out options that we think policymakers and state legislatures could use. We discussed implementation of taxation, raising the age restriction, and identifying what other states have done.
* Dr. Schacht noted that the policy overview in other states was very helpful. He mentioned that Vermont and Connecticut had capped their THC concentrations in recreation products. Dr. Schacht asked if text can be added to explain how those caps were determined and if is there any data (e.g., from toxicology monitoring systems) that can illustrate the impact of implementing these caps.
	+ Dr. Tung answered that to the best of our knowledge, these caps have not been evaluated yet; we will follow up on how they came up with the cut offs.
* Dr. Gregory Kinney applauded the policy paper and asked how the team decided what preexisting co-morbidities to focus on.
	+ Drs. Tung & Samet mentioned that there was no formal process.
* Chair Urbina noted that the SRC does not need to approve this policy paper or make recommendations today, but if desired, the SRC can make stronger and wider recommendations than those noted by the research team if the SRC chooses to. Chair Urbina asked the SRC to send him comments if they would like to pursue this avenue.
	+ Dr. Calcaterra wants to make stronger recommendations more focused on policy based on her experience in practice and when speaking to legislatures. Dr. Calcaterra expressed her concern with the interpretation of the “Shifting to lower-concentration products” as it may be too vague considering we have not clearly defined what is lower concentration.
	+ Dr. Erica Wymore agrees with Dr. Calcaterra’s comments and would like more succinct, specific recommendations. Dr. Wymore asked if the research team could add a section on collaborative goals with other organizations (e.g., dispensaries and marketplace) who are important stakeholders and on how to improve education and awareness of high-concentration products in dispensaries and for public health.
		- Dr. Samet agrees that there is a sentence in the paper that could be expanded.
		- Chair Urbina agrees with Dr. Wymore’s statement that we haven’t engaged with the industry. Chair Urbina asked for additional comments on the policy paper to be sent to Drs. Samet and Tung. If the SRC would like to make additional recommendations, please send them to Chair Urbina to draft a document from the SRC.
* Dr. Riggs asked if there is an opportunity to make recommendations as to additional research that is needed and if such recommendations are within the scope of the house bill.
	+ Dr. Samet mentioned it is within our purview.
	+ Dr. Riggs asked the team to mention the request for ongoing reviews of the literature and additional research to be conducted to address the gaps.
		- Dr. Samet commented that there are many gaps and that developing a systematic research agenda to cover them would be a massive task. Dr. Samet pointed to the National Academies committee that is focused on the public impact of cannabis, and it will likely develop a report that outlines a research agenda in the upcoming six months. It may be beyond our capacity to develop a well framed strategic agenda illustrating the research gaps.
		- Dr. Riggs agreed. However, we cannot make a concentration threshold line, so we need to conduct additional research to provide an evidence informed policy.
		- Dr. Samet stated that we can add a comment that there are gaps in the research and here are the most relevant to have evidence informed policies, or that there is no evidence to support a threshold concentration cut off, for example.
	+ Dr. Calcaterra asked for noting a need for universal terminology to describe products.

No further questions for Drs. Samet or Tung. SRC please send in comments to the appropriate parties.

**Terminology Discussion:**

* Dr. Wang provided an overview of the discussions the team has had internally and with external content experts who interact with users and are well versed with the cannabis field regarding what threshold do we call high-concentration cannabis products.
* Dr. Wang mentioned that we need to avoid comparison of previous mature cannabis marketplace flower; the bell curve distribution of flower concentration in today’s market has dramatically shifted. The average is 20% and the distribution drops off around 30-35% THC. For the average of concentrate products, the average is around 65% and the distribution drops off dramatically after 50% on the lower end and 90% on the upper end with a right skew distribution in the 2020 marketplace report.
* Dr. Wang relayed from the small group discussions that we are tailoring our focus on typical ranges of products rather than placing thresholds. Dr. Wang presented a concept figure to illustrate messaging we want to pass onto the educational campaign to use, outlining product details and product concentrations available in the marketplace. The figure highlights that it is not just the product we must be concerned about, factors like frequency, age of initial use, duration of use, and more can all contribute to the harmfulness nature of cannabis use. Dr. Wang asked for the SRC’s feedback on this display of messaging.

Questions and Answers:

* Dr. Kinney mentioned that THC from edibles can last up to 8 hours.
	+ Dr. Wang agreed and adjustments will be made.
* Dr. Wang asked the SRC if they have any comments on the general approach to illustrate concentration terminology using the “typical range” phrase.
	+ Dr. Riggs wants it to be stated more clearly and directly that any level of use carries health risks. Incorporate a disclaimer for the message to not be lost.
		- Dr. Wang highlighted that we have discussed a separate standalone document that portrays this message.
* Dr. Kinney asked to add a bioavailability statement regarding the amount of product absorbed by the method.
	+ Dr. Wang agreed to add this into the figure.
* Chair Urbina highlighted that we avoid a product that mentions a “How to Use” infographic and err on the side of caution.
	+ Dr. Schacht agreed with Chair Urbina and asked to remove the method of consumption from the infographic.
		- Dr. Wymore also agreed.

No further questions for Dr. Wang.

**Educational Campaign Update:**

* Dr. Ann Collier provided an overview of the progress from the education campaign and how the team plans to disseminate it to the Colorado public. Since the last meeting we have progressed with vendor selection for the media campaign. Out of 19 vendor applications, the selection committee, which included community members, and after interviewing four different companies, chose Initium Health to assist with the dissemination of the campaign. Dr. Collier identified reasons why Initium Health seemed to be the best option for our needs.
* Dr. Collier expressed that the education campaign is currently developing material that Initium Health will use to stage the creation of videos, written material, web-based curricula, and branding material that rely on approved HB 1317 educational toolkit message.
* Dr. Collier mentioned our new partnership with Colorado State University, University of Northern Colorado, and University of Colorado to create educational material for college-aged youth and pregnant people. This will be developed by the end of April.
* Dr. Collier highlighted the next phase of the campaign, which focuses on content dissemination, and Initium Health will assist with the strategic and integrated media campaign through mass media, social media, science informed art exhibitions, community workshop events, trainings, and digital health which will take place in May & June.
* Dr. Collier discussed the involvement of our community partners and their continuing engagement with how we deliver this information. We continue to meet with our community adult and youth advisory groups in Denver, Pueblo, and the San Luis Valley who have helped specifically with the work on stress management and coping strategies. They emphasized their desire to know more about what they can do rather than the message of what not to do.
* Dr. Collier’s team has developed work groups with about 10 people in at least 4-6 different groups of people to receive immediate feedback on materials proposed by Initium Health and other partners. Dr. Collier is following the same strategy to also receive feedback from the SRC.
* Dr. Collier mentioned that the team recently held an Artists Educational Forum over a three-day period where 19 different artists and 2 art curators attended and learned about what the topic for the art pieces are. Members of the SRC and the research team attended and presented to the artists, highlighting vulnerable populations. Community members attended and shared their perspectives as well. Artists also toured dispensaries and cultivator centers. Artists are currently developing their artwork pieces and will be reviewed. Display panels are also being developed with information from the HB 1317 toolkits and a published catalogue.
* Additionally, four different Colorado high schools will be working to create a youth show and will work with a youth art curator. A mural will also be created that will travel throughout the state. The art exhibit will take place at BRDG gallery in the Highland neighborhood in June 2024 where different community events will also be going on, including public lectures and information about high-concentration cannabis.
* Dr. Collier anticipates the educational toolkit deliverables to include videos, written products, three online educational modules that will be available via AI chatbot to support drug-free coping and provide information on cannabis, and motivational interview trainings at different levels.
* Dr. Collier and her team are following evidence-based strategies and developing an evaluation survey tool that can examine the different components about knowledge, attitudes, beliefs and behaviors about cannabis and high-concentration cannabis. It will also include population-based questions specific to knowledge and setting tailored as well. AI Chat bot and Initium Health will also conduct additional evaluations of campaign materials, such as impressions per channel, page visits, clicks, and interactivity. This evaluation will be used to adjust future educational campaign activities.
* Dr. Collier mentioned that the campaign team is on target to spend down their entire budget by June 30th with no carry forwards based on the different projects they have outlined to focus on individuals under 21 years old and pregnant individuals through a community engaged approach.

Questions and Answers

* Dr. Riggs acknowledged the great progress in the educational campaign and asked if a linkage or resource to evidence-based treatment resources is provided in the campaign material.
	+ Dr. Collier added that this is included in the campaign, but we can further emphasize this in the campaign. The community is asking how to understand when an individual is addicted to cannabis use and how to approach this scenario.
	+ Dr. Riggs will send Dr. Collier some evidence-based resources available in the state.
	+ Dr. Calcaterra mentioned the STEP clinic available at Denver Health.
* Dr. Wymore commended the work being done. Dr. Wymore asked for harm reduction strategies to be made more available in the campaign specifically for those who are using and have young children at home.
	+ Dr. Collier mentioned that this is a topic mentioned often in the youth advisory groups.
	+ Dr. Kinney recommended reaching out to CEDAR Colorado in regard to harm reduction.
* Chair Urbina asked that the population of those post-partum are not forgotten as well.
	+ Dr. Collier acknowledged Chair Urbina’s comment.
* Chair Urbina asked Dr. Collier what is needed from the SRC in regard to the education campaign.
	+ Dr. Collier mentioned that we will need a quick turnaround regarding the SRC’s approval. Drs. Collier and Tung are asking for all proposals from the vendors and partners to be submitted by March 8th to make certain that they are reviewed and staying on task with our messaging. It would be helpful to receive SRC feedback as we progress to avoid surprises. Dr. Collier will reach out to the SRC as approval is needed.
* Dr. Samet asked at what stage the SRC would want to see the components of the educational campaign considering the pace at which they are being developed.
	+ Dr. Collier agreed that in the next 2-3 weeks we will need additional approval and agreement of the direction the educational campaign is headed.
	+ Chair Urbina asked for a meeting at the beginning of March to comment on the progress of the educational campaign and the policy piece.
		- Dr. Samet agreed.
		- Dr. Collier asked for the second week of March.
			* Dr. Samet commented that given our two-week notice requirement, the meeting will take place in the second week of March.

No further questions or comments.

**Open Discussion with SRC**

* Chair Urbina asked the group for questions or comments. Chair Urbina applauded the presentation and commended the campaign team for their work.

No further questions or comments.

**Next Steps from the Cannabis Research and Policy Team:**

* Chair Urbina and Dr. Samet agreed on an accelerated meeting schedule for the SRC and receiving input on the educational campaign. Chair Urbina and Dr. Samet appreciated the feedback from the group and the hard work from the team.
* Chair Urbina let the team know to be on the lookout for a poll to determine when the next meeting will be.

No further questions or comments for Chair Urbina and Dr. Samet.

**Next Meeting Timing and Closing Remarks:**

* No final questions or comments.
* Meeting Adjourned 10:55 am (MT).