

## **Retail Marijuana Scientific Advisory Committee**

### **Public Meeting Minutes**

**November 19, 2015**

**In Attendance:** Katrina Hedberg, MD, MPH, Bruce Gutelius, MD, MPH, Andris Antoniskis, MD, Dennis McCarty, PhD, Marcus Watt, RPh, Diane Lia, LCSW, CADC II, PhD, MPH, Julia Dilley, PhD, Jane Ishmael, PhD, Kim Repp, PhD, MPH, Heather Zwickey, PhD, Kathleen Carlson, MS, PhD, Richard Farmer, PhD, Rob Hendrickson, MD, Tim McAfee, MD, MPH,

**Staff:** Dawn Quitugua, Gabriela Tanaka, Jonathan Modie

**Guests:** Gerry Lehrburger, MD

### **Committee Member Introductions**

### **Approval of Minutes from 10/22/15 Public Meeting**

1. Reviewed and approved the minutes from the 10/22/15 committee meeting. Minutes from 10/22/15 will be available on the Oregon Health Authority Public Health Division website.

### **Purpose/Agenda**

1. Provide scientific input that will inform Public Health Division recommendations related to retail marijuana sales in Oregon.

### **Adult Marijuana Use: Cognitive and Neurological Effects**

Committee members reviewed the Adult Marijuana Use: Cognitive and Neurological Effects table and determined whether they concur with the proposed public health statements.

1. **Memory Impairments**

Evidence Review

- a. Colorado report review concludes there is substantial evidence that adults who use marijuana heavily (defined as daily or near daily use) are more likely than nonusers to have memory impairments for at least 7 days after last use.
  - i. One committee member made a comment stating that “impaired memory” is not clearly defined. Another cautioned that existing evidence includes studies of people in treatment. He added that, for cross-sectional studies, we can’t be sure that linkages are causal.

Public Health Statement

- a. Heavy use of marijuana is associated with impaired memory, persisting a week or more after quitting.
  - i. With the above caveats in mind, committee members agreed with the above public health statement.

2. **Acute Psychotic Symptoms**

Evidence Review

- a. Colorado report review concludes there is substantial evidence that THC intoxication can cause acute psychotic symptoms, which are worse at higher doses. This is based on randomized, controlled trials of small numbers of people who were exposed to different doses of THC intravenously.

Public Health Statement

- a. Use of THC, a component of marijuana, can cause acute psychotic symptoms during intoxication.
  - i. No objections or concerns were raised by committee members with the above public health statement.

3. **Symptoms or Diagnosis of Depression and Anxiety**

Evidence Review

- a. Colorado report review concludes there is moderate evidence that adults who use marijuana regularly are more likely than non-users to have symptoms or diagnosis of depression.
- b. Colorado Report Review concludes there is limited evidence that adults who use marijuana are more likely than non-users to have symptoms or diagnosis of anxiety.

Public Health Statement

- a. Regular use of marijuana is associated with depression and may be associated with other mental health disorders such as anxiety and psychosis.
  - i. Members of the committee recommend splitting the above public health statement into two separate statements; 1) Regular use of marijuana is associated with depression. 2) Regular use of marijuana may be associated with other mental health disorders such as anxiety and psychosis. The message can then be specific to depression and diagnoses of anxiety and psychosis. For all conditions mentioned, committee members recommended making it clear that these statements refer to future symptoms and diagnoses, as opposed to immediate reactions to acute use.

4. **Acute Anxiety Symptoms**

Evidence Review

- a. Evidence for this outcome was not reviewed in the Colorado report.

Public Health Statement

- a. No public health statements were proposed for this category.

5. **Symptoms or Diagnosis of Psychosis**

Evidence Review

- a. Colorado report evidence review concludes there is limited evidence that adults who use marijuana are more likely than non-users to have symptoms or diagnosis of psychosis, and increasing likelihood with greater marijuana use.

Public Health Statement

- a. No specific public health statement was put forward in the Colorado report. The following adaptation of a statement in the Washington County review was proposed for consideration: *Chronic use of marijuana may precipitate schizophrenia in vulnerable individuals.*
  - i. Committee members expressed concern with using this statement because the review is based on a chart review study and it's unclear how reliable it was. The estimated impact of marijuana use on the number of cases of schizophrenia is also limited, even assuming a causal relationship.
  - ii. Committee members agreed this statement should not be put forward.

6. **Diagnosis of Schizophrenia**

Evidence Review

- a. Evidence for this outcome was not reviewed in the Colorado report.

Public Health Statement

- a. As in the 'Symptoms or Diagnosis of Psychosis' category above, the following statement was proposed for this category: *Chronic use of marijuana may precipitate schizophrenia in vulnerable individuals.*
- b. As noted above, committee members agreed this statement should not be put forward.

7. **Mental Illness**

Evidence Review

- a. Evidence for this outcome was not reviewed in the Colorado report.

Public Health Statement

- a. As in the ‘Symptoms or Diagnosis of Psychosis’ category above, the following statement was proposed for this category: *Chronic use of marijuana may precipitate schizophrenia in vulnerable individuals.*
- b. As noted above, committee members agreed this statement should not be put forward.

8. **Impaired Decision Making**

Evidence Review

- a. Colorado report evidence review concludes there is limited evidence that adults who use marijuana regularly are more likely than non-users to have impaired decision-making for up to 2 days without use.

Public Health Statement

- a. No specific public health statement was put forward in the Colorado report. The following adaptation of a statement in the RAND report was proposed for consideration: *Persistent regular cannabis use is associated with small but meaningful long-term impairments in cognitive functioning, but the possibility remains that the associations are partly or wholly spurious.*
- b. Committee members agreed that this statement should not be put forward, given limited or mixed evidence supporting it, and the fact that the statement is very equivocal. However, one committee member emphasized that this and other related outcomes should continue to be considered and explored, as they are important outcomes.

9. **Impaired Executive Functioning**

Evidence Review

- a. Mixed evidence for whether or not adults who use marijuana are more likely than non-users to have impaired executive functioning, after not using for a short time.

Public Health Statement

- a. (See notes on the Public Health Statement for ‘Impaired Decision Making’ above).

10. **Impairment of Memory or Other Cognitive Functions**

Evidence Review

- a. Mixed evidence for whether or not adults who use marijuana heavily are more likely than non-users to have impairment of memory or other cognitive functions for at least 28 days after last use.

Public Health Statement

- a. (See notes on the Public Health Statement for ‘Impaired Decision Making’ above).

**Marijuana Use and Cardiovascular Health**

Committee members reviewed the Marijuana Use and Cardiovascular Health table and determined whether they concur with the proposed public health statements.

1. **Myocardial Infarction (Heart Attack)**

Evidence Review

- a. Colorado report concludes limited evidence that acute marijuana use increases risk of myocardial infarction.

Public Health Statement

- a. Acute marijuana use may be associated with increased risk of heart attack among adults.

- i. The committee agreed with this statement, but suggested refraining from making it a point of emphasis. They agreed that we should acknowledge the possible association.
  - ii. One committee member suggested that a possible mechanism for this association is the known action of THC in increasing heart rate. Another committee member suggested that, like combustible tobacco, there are plenty of possible mechanisms that could contribute to this association, and that there is a good toxicologic argument to support it.
2. **Death Related to Myocardial Infarction (Heart Attack)**
  - Evidence Review**
    - a. Insufficient evidence that acute marijuana use increases risk of death related to myocardial infarction (heart attack)/cardiovascular events.
  - Public Health Statement**
    - a. No specific public health statement was put forward in the Colorado report.
3. **Stroke (Ischemic)**
  - Evidence Review**
    - a. Limited evidence that marijuana use increases risk of ischemic stroke.
  - Public Health Statement**
    - a. Marijuana use may be associated with increased risk of stroke in adults.
      - i. The committee agreed with this statement.
      - ii. One committee member suggested removing the words “among adults” from the statement as the studies range in ages from adolescents to adults. Subsequent discussion with the committee member from Colorado confirmed that the words “in adults” should be removed from this statement, as this was included in error.

### **Packaging, Labeling, Serving Size Temporary Rules**

1. Temporary rules that relate to packing, labeling and serving size are now in effect. Permanent rules will be developed by the Rules Advisory Committee. Public hearings and testimonies will take place in developing the permanent rules. Input from this committee is encouraged and welcome.

### **Topics for 01/28/16 RMSAC Meeting**

Marijuana Data Monitoring and Surveillance.

Future Topics:

- 1) Marijuana addiction and treatment
- 2) Pharmaceutical/alcohol/nicotine products with marijuana
- 3) Testing for contaminants/toxicity in the environment/products, and alerts
- 4) Workplace safety, injury prevention, driving while impaired

### **Public Comment Period**

Meeting adjourned at 4:37 p.m.