

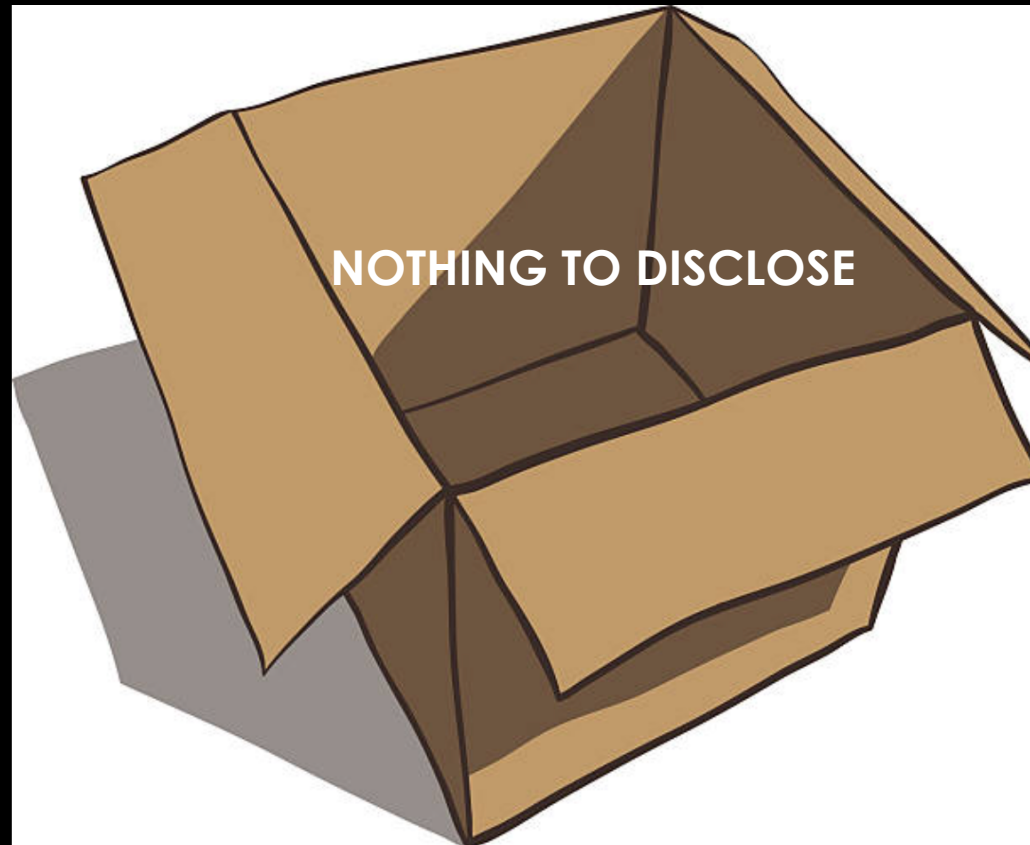
**STANFORD ADOLESCENT MENTAL WELLNESS CONFERENCE:
OVERCOMING CULTURAL BARRIERS TO ACCESS**

**PLENARY PANEL
THE INTERSECTION OF MENTAL HEALTH AND
MARIJUANA LEGALIZATION**

Time: Friday, April 27, 3:15-4:15p

**Paula Riggs MD, Professor
Director, Division of Substance Dependence
Department of Psychiatry
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INTERSECTION OF MENTAL HEALTH AND MJ LEGALIZATION



NATIONAL TRENDS IN MJ USE



**MJ use more than doubled between
2001- 2013 (*Hasin et al AJP 2016*)**

- **> 111 million Americans have tried**
- **> 22 million are current users**
- **2014– 2.4 tried for first time**
- **2015- 2.5 % (>6 million) met criteria for CUD but only 10% received treatment**



**Tetrahydrocannabinol (THC)
Active Ingredient in Marijuana**

UNPRECEDENTED “MEDICALIZATION” PRIOR TO RECREATIONAL LEGALIZATION

- Legalization of an addictive substance (e.g. tobacco, alcohol) increases access, prevalence and frequency of use
- “Medicalization” prior to recreational legalization is unprecedented

Rx opioids are “medical”
but not legal for
recreational use

WHAT'S REALLY GOING ON HERE?

- > 50% of states + DC have legalized cannabis for medical conditions and/or recreational retail sale
- 9 states + Washington DC have legalized recreational use; in all cases medical legalization preceded recreational legalization
- De-criminalization, legalization, and 'medicalization' contributes to low perceived risk and acceptability, which may predict higher use in the future



The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research

National Academies of Science, Engineering, Medicine 2017

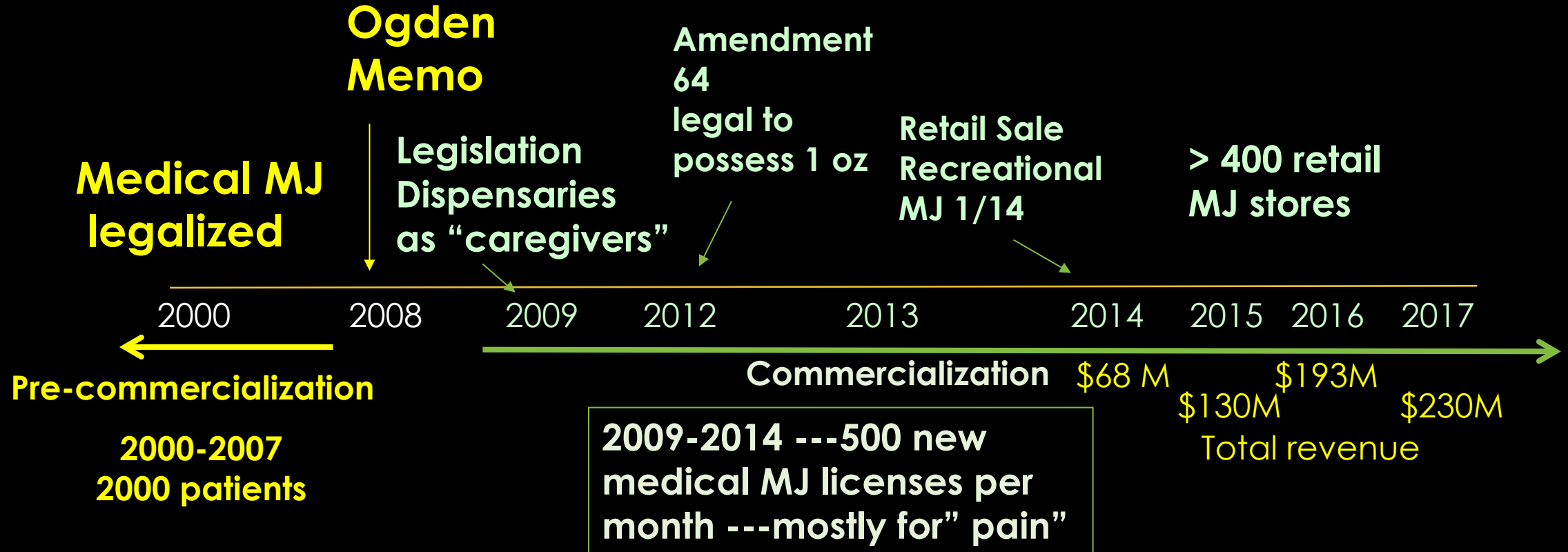
Only modest to weak empirical support for the efficacy of “medical “ marijuana for most indicated conditions

AIDS, Cancer, MS, epilepsy, severe pain, glaucoma, PTSD in Florida, NM, Colorado)

“There is no current scientific evidence that MJ is in any way beneficial for the treatment of any psychiatric disorder. In contrast, current evidence supports, at minimum, a strong association of cannabis use with onset of psychiatric disorders. Adolescents are particularly vulnerable to harm, given the effects of cannabis on neurological development. “

APA ,2013

LESSONS LEARNED FROM THE COLORADO EXPERIENCE



Does this look like a pharmacy?



Does this look like medicine?



THERE 'S A DIFFERENCE BETWEEN "CANNA-BUISINESS " AND CANNABIS-BASED MEDICINE

EDIBLE MARIJUANA



STEALTH VAPING



(Ben Livingston, The Cannabist)

Stealth PUFFiT vaporizer mimics asthma inhaler (review)

me. All rights reserved.

RISKS OF INCREASED POTENCY

More Addictive?

- 1/11 adults and 1/6 adolescents who experiment progress to dependence
- We don't know what the ratio is with > THC potency
- 33% of MJ users in Colorado are daily/multiple x daily users

Greater Risk of Psychosis?

- Risk of psychosis is attributable to THC-active ingredient
- Regular MJ use in adolescents quadruples risk of psychosis
- Even in those without genetic vulnerability to schizophrenia > THC potency > risk psychosis

(Large et al 2011; DiForti et al., 2009; D'Souza, 2004, 2009)

Public Health Impact of MJ Legislation

Trends in Use

- Medical MJ legislation has not increase adolescent use (Hasin 2016)
- 1/4 of HS seniors and young adults report past month use (*Ryan-Ibarra 2015; Hasin, 2016*)
- 40% of HS seniors reporting past month use also report using > 14 days/month
- Increase in proportion of HS seniors using => 10 days/month (Washington).
- Differences between “opt in” v “opt out” municipalities

Maxwell and Mendelson J Addict Med Feb. 2016; Hasin 2016

Public Health Impact of MJ Legislation in Colorado

2011-2013

- HOSPITALIZATIONS --MJ-related Increased 67%
- ED VISITS: 1% of all ED visits MJ – related
- RM Poison Center – MJ related calls increased 79%
- MVAs- MJ related fatalities inc. 44%
- Substance treatment admissions have decreased
-

Maxwell and Mendelson J Addict Med 2016

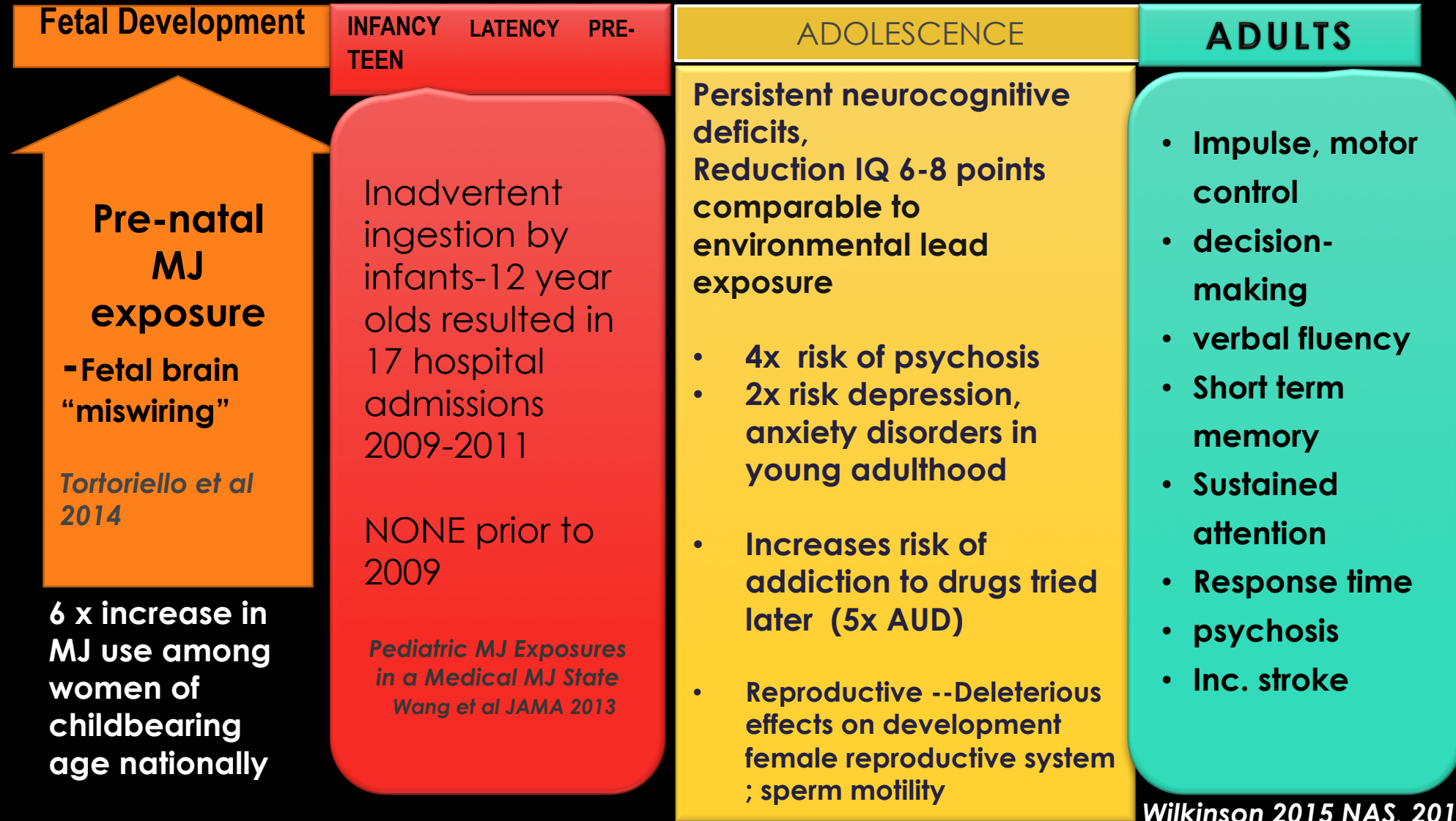
2012-2014 MJ-RELATED CRIME

- Arrests for sale and possession
 - Adults ---Decreased by 46% (51% Whites; 33% Hispanics; 25% African-Americans) Arrest rate for AA was almost triple that of Whites in 2014
 - Adolescents-- increased (White -8%; Hispanic +30% African American+58%)
- Other MJ Crime
 - Industry-related burglaries (63%)
 - Interdiction inc. > 50%
 - DUI-increased from 33% to 73% of all DUIs 2012-2014

Marijuana Legalization in Colorado: Early Findings:
A Report Pursuant to SB 13-283 March 2016

Effects of MJ

Brain Development and Neurocognitive





Begs the
Question?

If there was a neurotoxin in the air or the water that at least 50% of our kids were being exposed to

... and 1/6 of these, exposed at levels associated with significant reductions in IQ, learning problems, academic underachievement, and persistent neurocognitive deficits

WOULDN'T WE BE ALL OVER THAT?

6-8 point reduction in IQ associated with regular adolescent MJ use comparable to 7.4 point reduction associated with environmental lead exposure (10 mg/dc) *Meier et al 2012; Canfield et al 1996*

IMPLICATIONS FOR PUBLIC POLICY, RESEARCH, CLINICAL PRACTICE

POLICY

- Improve and standardize data collection and surveillance methods to accurately assess the public health impact legalization
- Industry restrictions
 - Potency limits
 - Positive overstatements about the benefits, medicinal properties, risk minimization
 - Marketing targeting minors
 - Packaging of edibles
 - Eliminate Incentives that encourage increased frequency of use

RESEARCH

- Therapeutic benefits and risks
- Relationship between increased potency on psychosis, neurocognitive, addiction potential
- Impact on treatment populations



THANK YOU FOR YOUR ATTENTION

Questions?
Comments?
Discussion?