

A photograph of a cannabis grow room. Rows of cannabis plants are growing under bright yellow LED lights. Large industrial fans are visible on the ceiling. The room is dimly lit, with the primary light source being the grow lights.

# Cannabis

## an introduction

**Week of health**  
**Jönköping, April 3, 2017**

Pelle Olsson [www.pelleolsson.se](http://www.pelleolsson.se)

# Different drugs from cannabis



Marijuana



Hasch

Edibles (to eat or drink)



# Cannabis contains a.o.:

- ▶ THC

(delta-9-tetrahydrocannabinol) The substance that makes you high.

- ▶ CBD

(cannabidiol) Doesn't give any intoxication, but protects the brain from THC.

# Why is cannabis regulated?

## ► 1945 - 1961

Many countries, for example Angola, Brazil, Egypt, India, Iran, Mexico, Maroc, Sovjet Union, South Africa, Tunisia reported to United Nations about big health problems with cannabis.

## ► 1961

Therefore cannabis was included in Single Convention on Narcotic Drugs 1961 together with opiats and cocaine.

## ► Today

All nations have ratified Single Convention ...

... except

- ▶ The Netherlands, with their coffee shops
- ▶ Uruguay, where the parliament has decided to legalize, but they have not started yet
- ▶ 8 states in USA

# The cannabis of 1961





# Cannabis of today



How do you find  
knowledge about  
cannabis?



► Experiences



► Scientific research

which is published in scientific magazines

► Statistics

# Where do you find this research?

## Report about cannabis from WHO, 2016



[http://www.who.int/substance\\_abuse/publications/cannabis\\_report/en](http://www.who.int/substance_abuse/publications/cannabis_report/en)



New report 2017  
from National  
Academies of  
Sciences,  
Engineering and  
Medicine.

Analysis of 10.000  
articles from 1999  
up to know.



What is most  
impaired by  
cannabis?

# Right answer:

## ▶ The teenage brain

All other brains

Physical injury

# Cognitive impairment

Among others:

- ▶ Memory
- ▶ Intelligens, IQ
- ▶ Verbal capacity

→ poorer educational outcomes



# More harms on the young brain

- ▶ Not fully developed frontal lobe
- ▶ 2-3 times increased risk of schizophrenia
- ▶ 10 percent get psychosis
- ▶ 17 percent will be addicted

# Cannabis och alcohol

# First a little bit of statistics ...

## ▶ The whole world:

- ▶ 38 % has used alcohol during the last 12 months
  - ▶ 4 % has used cannabis

## ▶ Sweden

- ▶ Alcohol 70 %
- ▶ Cannabis 3 %



# Cannabis users drink more alcohol

## Sweden:

Students (17-18 years), non users of cannabis:

 3 litres of pure alcohol each year

Used cannabis < 20 ggr  8 litres alcohol

Used cannabis > 20 ggr  13 litres alcohol

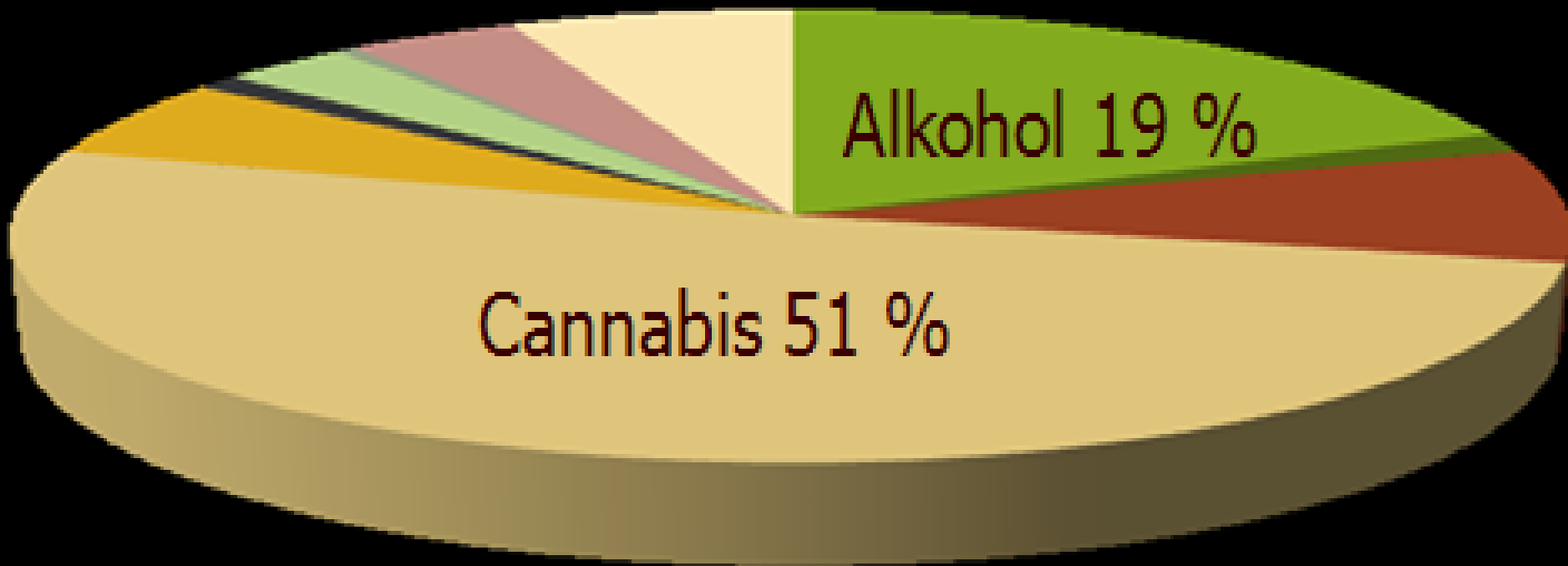
Source: Guttormsson: Vad vet vi om cannabis-användning bland unga. CAN 2014.

Statistics over addiction care from the several countries shows that many more young people are seeking help due to cannabis compared with alcohol, although alcohol is much more used.

# Addiction care in the Netherlands

## Beroendevård i Holland < 25 år

Key figures addiction care 2013, [www.sivz.nl](http://www.sivz.nl)





# Addiction care, USA 12-17 years

[www.samhsa.gov/](http://www.samhsa.gov/)

Alcohol and cannabis as main drugs in %



# Medical marijuana

- ▶ The same product as any other cannabis.
- ▶ Not licensed medicine in any country.
- ▶ There are licensed medicines which contain THC and CBD. But that is not the same as cannabis.

Wayne Hall  
Professor, researcher  
etc. Australia:

“The evidences  
that marijuana  
is an effective  
medicine are  
very weak.”



# Pharmacological science about cannabis:

- Cannabis can alleviate pain, nausea, spasm in Multiple sclerosis, MS, and maybe epilepsy and increase appetite, but there are too many adverse effects.
- Some sources;
  - Bertha K. Madras. Update of Cannabis and its medical use. 37th ECDD Agenda item 6.2, WHO. 2015.
  - The National Academies of Sciences: The Health effects of cannabis and cannabinoids (2017)

”We will use the medical marijuana argument as a red herring on the road to full legalization.”

Ketih Stroup, National Organization for the Reform of Marijuana Laws, NORML, 1979

# Does not recommend medical marijuana:

- ▶ American Medical Association
- ▶ American Cancer Society
- ▶ American Glaucoma Society
- ▶ National Multiple Sclerosis Society
- ▶ American Society Addiction Medicine
- ▶ The American Academy of Pediatrics
- ▶ The American Epilepsy Society
- ▶ The American Academy of Family Physicians
- ▶ American Osteopathic Association



# Colorado

- ▶ 2009 Medical marijuana for all ages  
2014 Legalization
  - regulated and taxed as alcohol
- ▶ Today > 900 shops for recreational and/or medical marijuana
- ▶ 117.000 persons (out of 5 milj inhabitants) had a Red card 2015.
- ▶ Cannabis = **Big Business**

# Colorado after the commercialization and legalization





New products to earn money:

# THE ULTIMATE MUNCHIE CANDY BAR





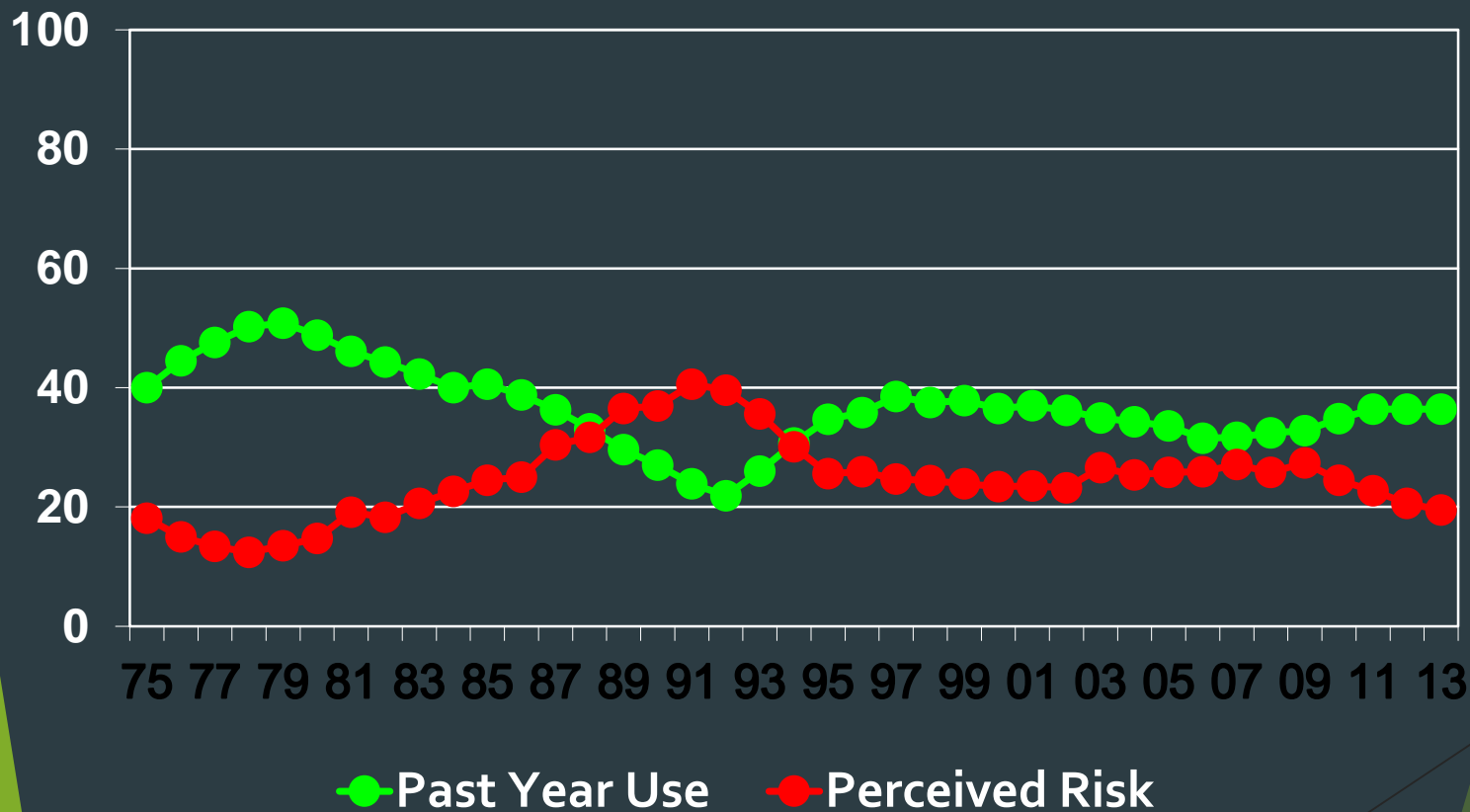








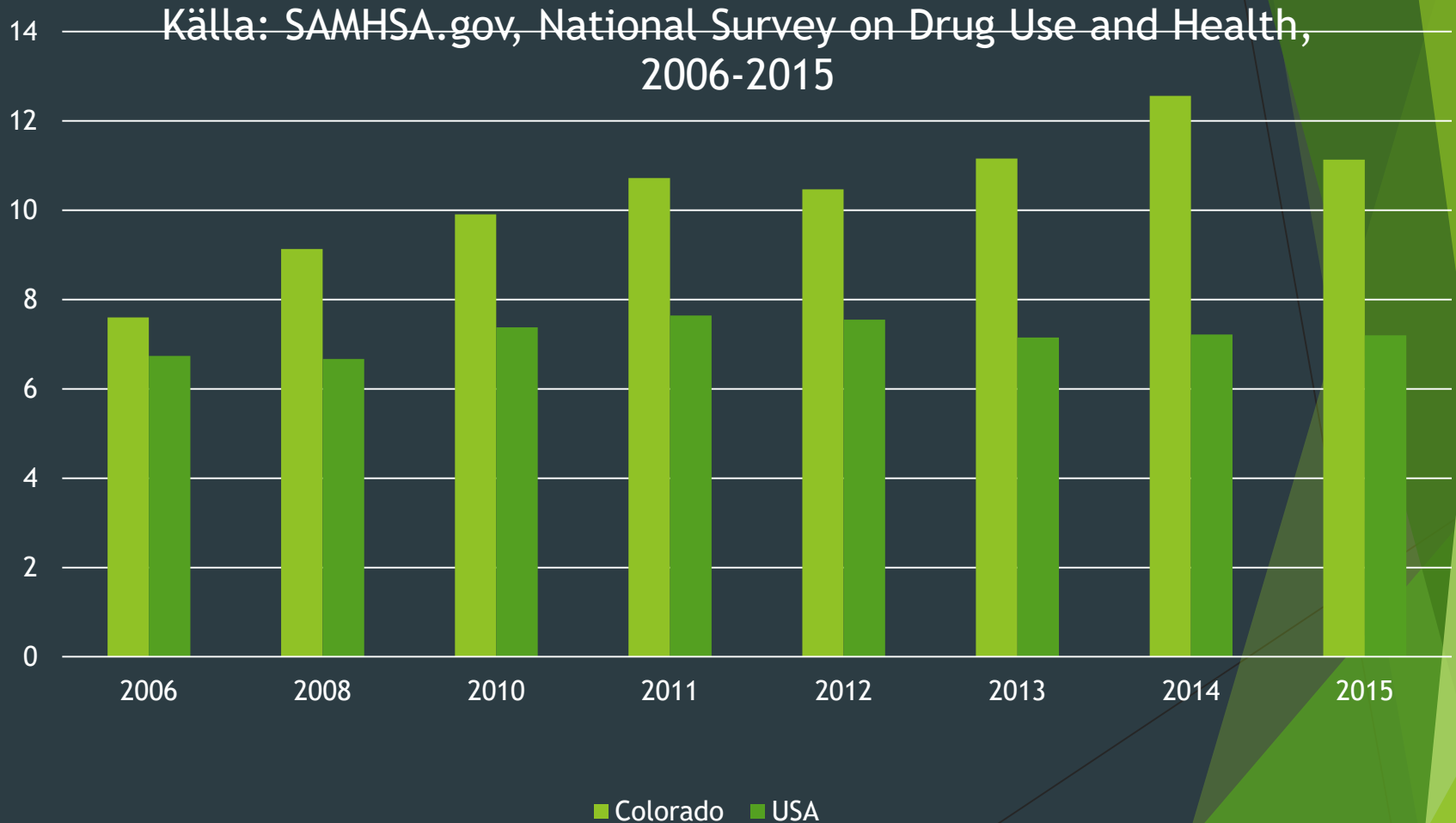
# More youngsters use cannabis when the perceived risk are low



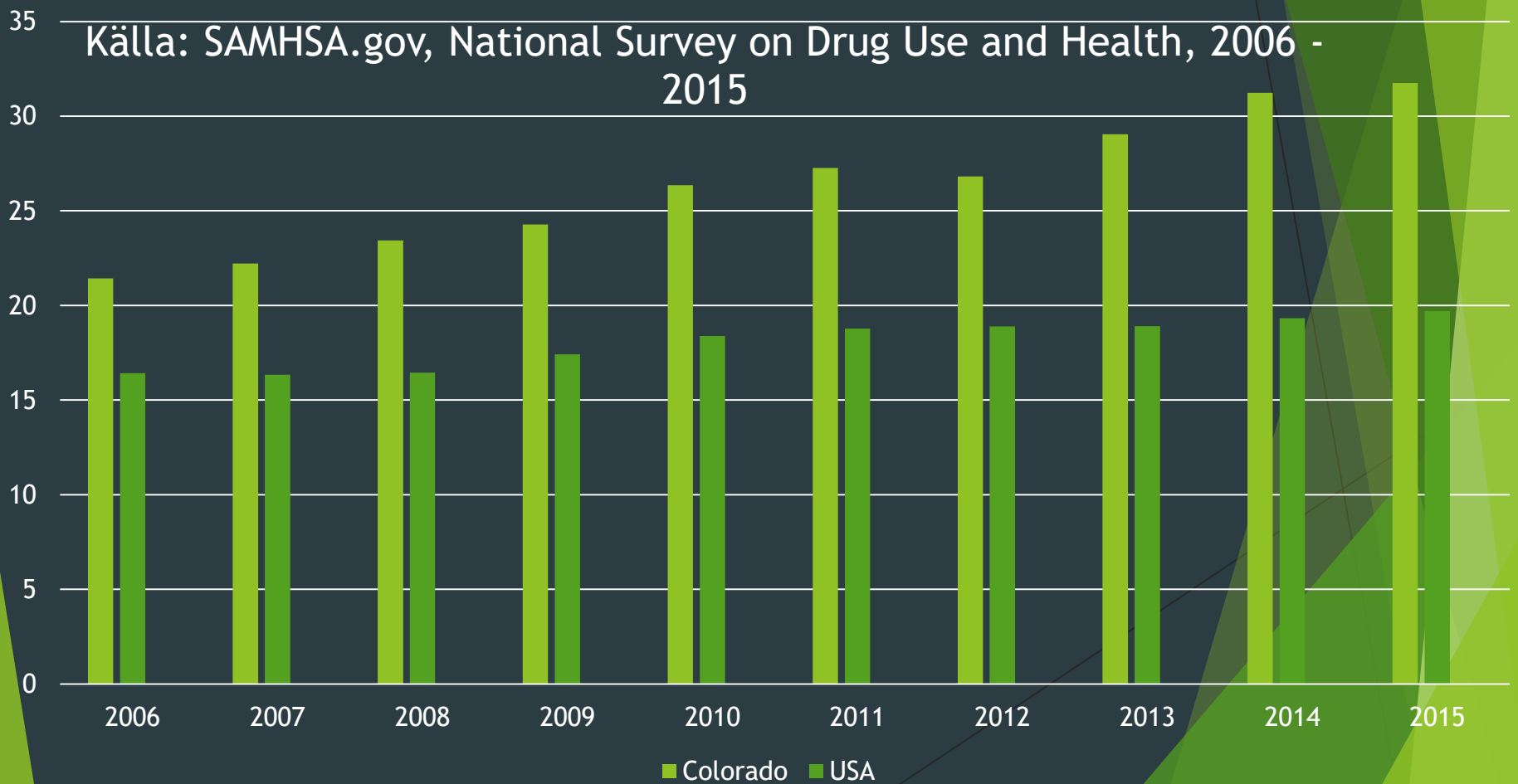
SOURCE: University of Michigan, 2013 Monitoring the Future Study

# Cannabis use, last month in % Colorado and USA 12-17-years

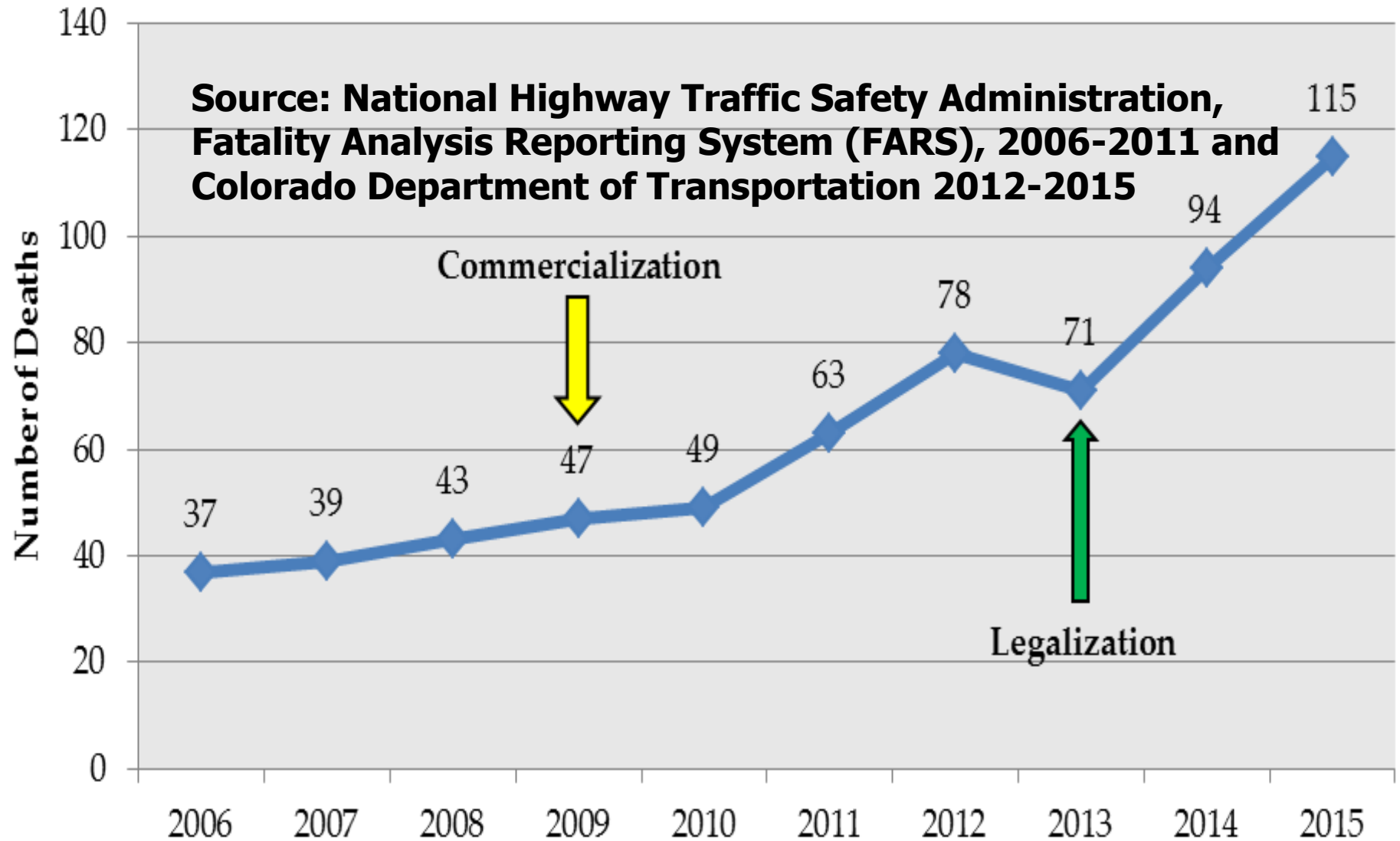
Källa: SAMHSA.gov, National Survey on Drug Use and Health,  
2006-2015



# Cannabis use, last month in % Colorado and USA 18-25 years



# Traffic Deaths Related to Marijuana\*



\*Number of Fatalities Involving Operators Testing Positive for Marijuana



# Crime after the legalization

- ▶ The total number of crimes in Colorado has increased 6 % 2014 - 2015

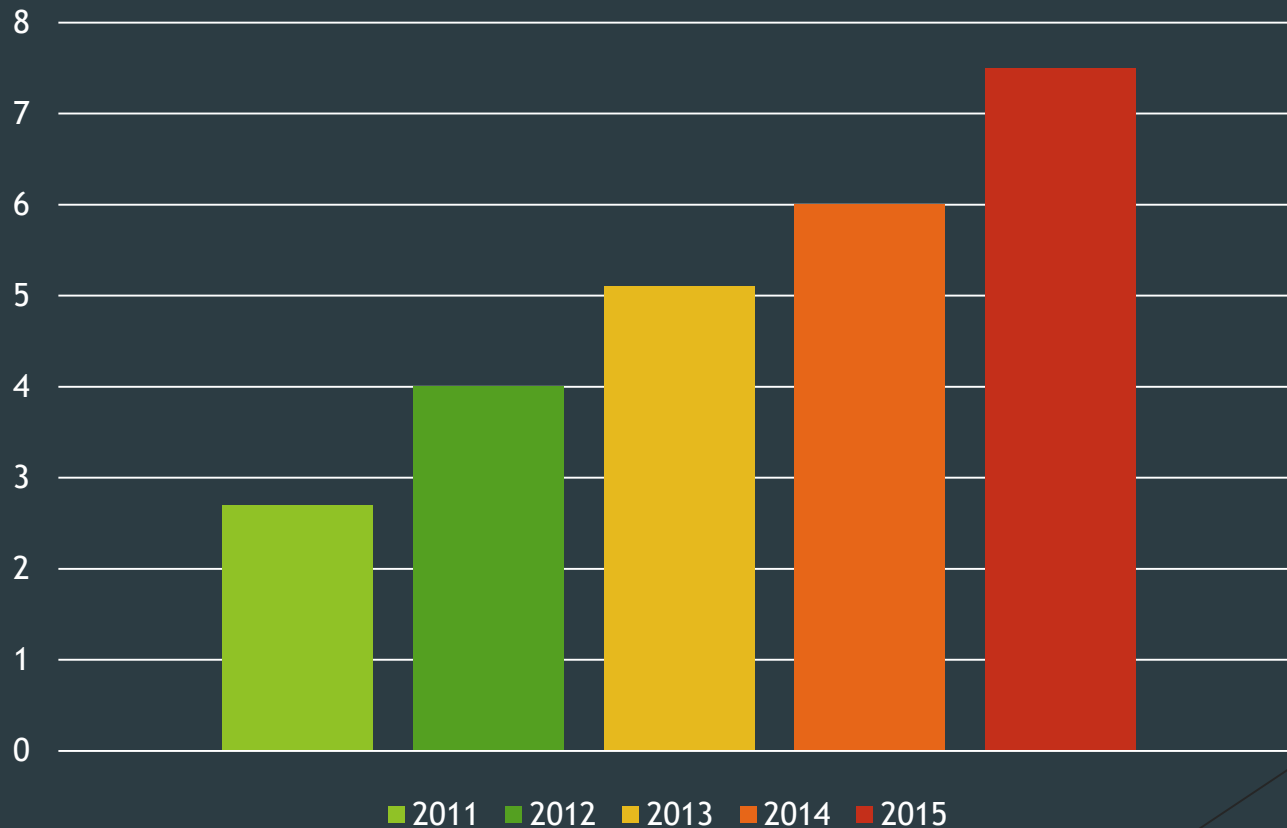
(half of the population lives in cities without legal marijuana)

- ▶ The total number of crimes in Denver has increased 16 %, 2013 -2015

Source: Colorado Bureau of Investigation,  
<http://crimeinco.cbi.state.co.us/>

# Positive drug tests in % for marijuana on working places

Source: Quest Diagnostics, 2015 data from over 900k tests from Jan to Dec



”There is not the same driving force for us who are against drugs because of moral reasons or concern about public health, compared with those who advocate cannabis because they can earn money on the drug.” Ben Cort, Smart Approaches to Marijuana (SAM).

# Thanks you for your attention!

pelle.olsson52@gmail.com

[www.pelleolsson.se](http://www.pelleolsson.se)