

# Consumer Behavior and Assessing Effects of Cannabis Products



**Youn Ok Lee, PhD**

**Scientific Data and Information About Products Containing Cannabis or Cannabis-Derived Compounds  
FDA Public Hearing**

# Acknowledgements

## Collaborators

- Matthew Eggers, MPH
- Jesse Thompson, BS
- Jessica Pepper, PhD
- Ashley Feld, MPH
- Jenny Wiley, PhD

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# Manufacturers are rapidly introducing a wide variety of cannabis and cannabis-derived products



These products introduce many modes of delivery for consuming cannabis and cannabis-derived compounds, such as CBD.

Large representative surveillance surveys for monitoring consumers' use of cannabis products do not capture the variation of products in the market.

# Cannabis products containing tobacco are also being sold



While prevalent, little is known about the effects of co-administering cannabis with tobacco or whether co-delivery influences health risks.

# Little is known about which populations are using these products and modes of administration

The image displays three overlapping screenshots from the KandyPens and Leafly websites. The top-left screenshot shows a product page for the Amber Rose Collection Champagne (White) vape pen, priced at \$148.00. The top-right screenshot shows a video player with the text "WE THE NEW WAVE" and a "PLAY ME" button. The bottom screenshot shows a Leafly website interface with a sidebar menu and a main banner for "Marijuana Products & Accessories" featuring a "TRY THE CBD" logo and a 20% discount for seniors and veterans.

Cannabis products are marketed to different populations who may be at varying health risks for negative health outcomes.

# Purpose

Describe cannabis use behaviors and demographic characteristics of cannabis consumers in the U.S.:

1. What types of cannabis products, and associated modes of delivery, are used by consumers?
  - High THC, High CBD
  - Inhaled, edible, topical
  - Simultaneous use with tobacco products
2. Does preferred THC/CBD concentration vary across sociodemographic groups?
  - Age
  - Gender
  - Socioeconomic status
3. What motives for use are associated with high CBD products?
  - Coping
  - Enhancement
  - Social
  - Conformity
  - Routine
  - Expansion

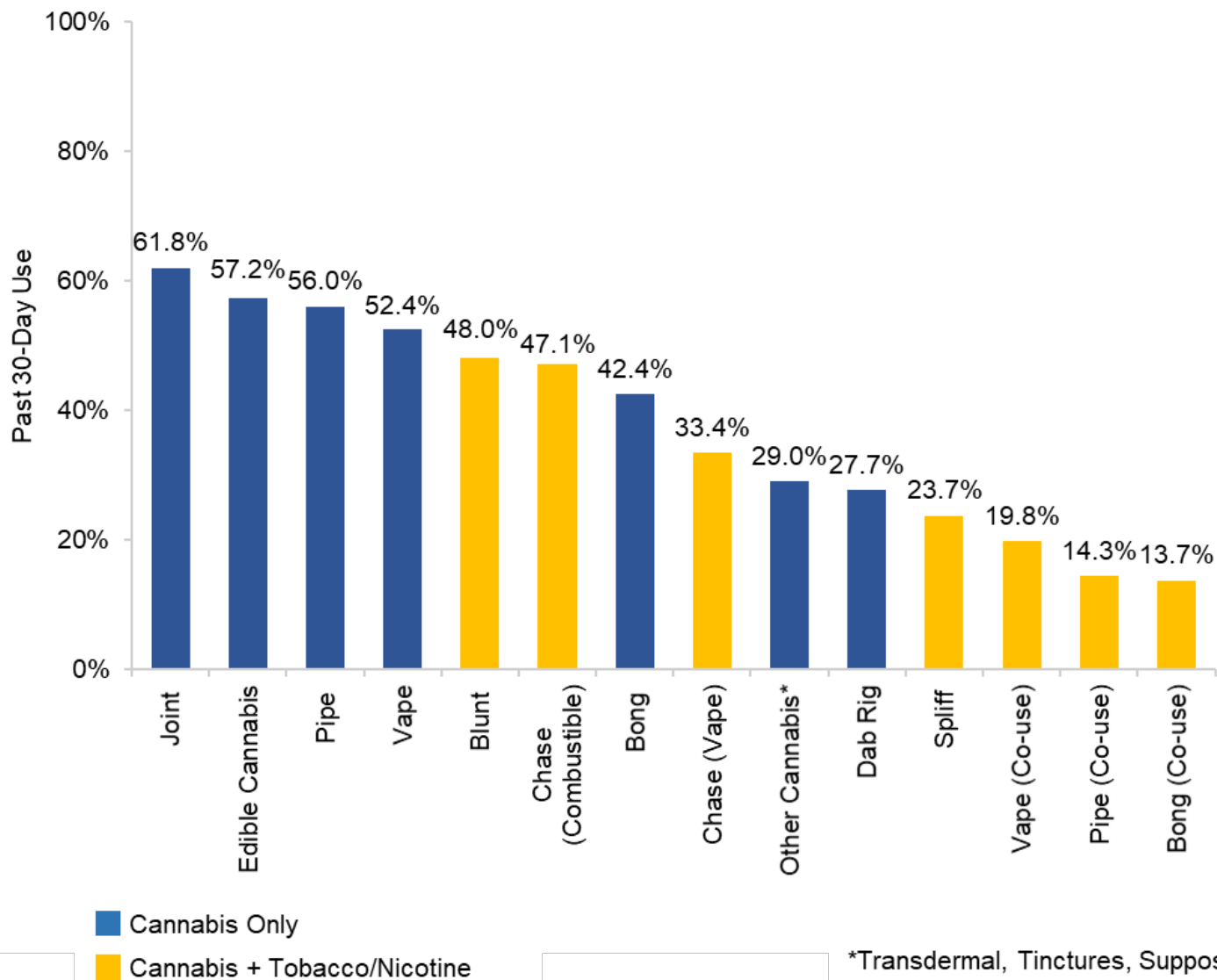
## Online survey of past 30-day cannabis users residing in legal recreational use states

- Convenience sample of Kantar panelists
  - Calibration weights using state 2016/17 BRFSS demographic data on past 30-day cannabis use, age, race, sex, and educational attainment
- N= ~2,978
- Adults aged 21 and over
- Past 30-day cannabis use
- Collected November – December 2018
- Reside in the following states at the time of survey:
  - Alaska, California, Colorado, District of Columbia, Maine, Massachusetts, Nevada, Oregon, Washington

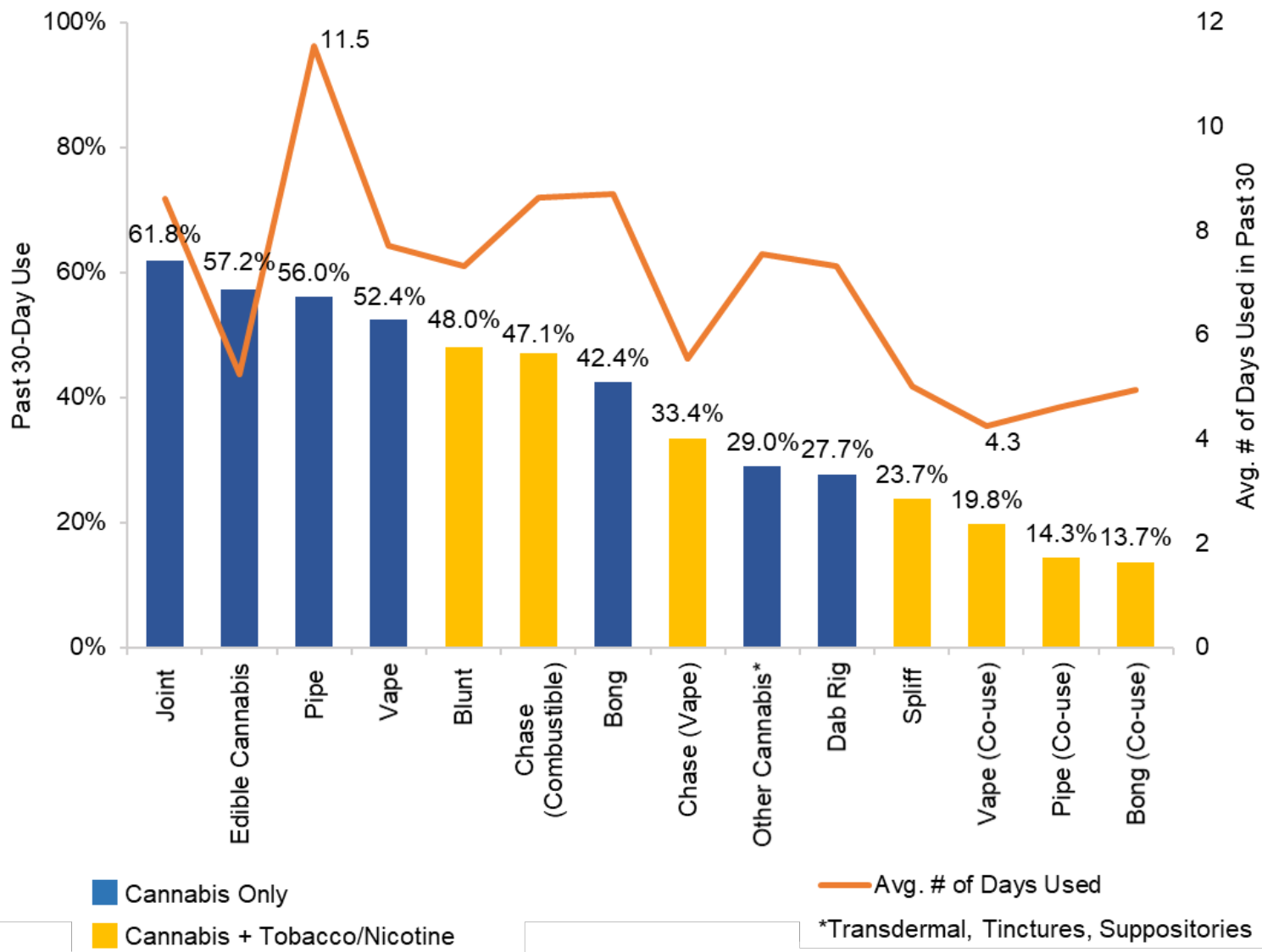
# **Results: Cannabis Use Behaviors and Consumer Characteristics**



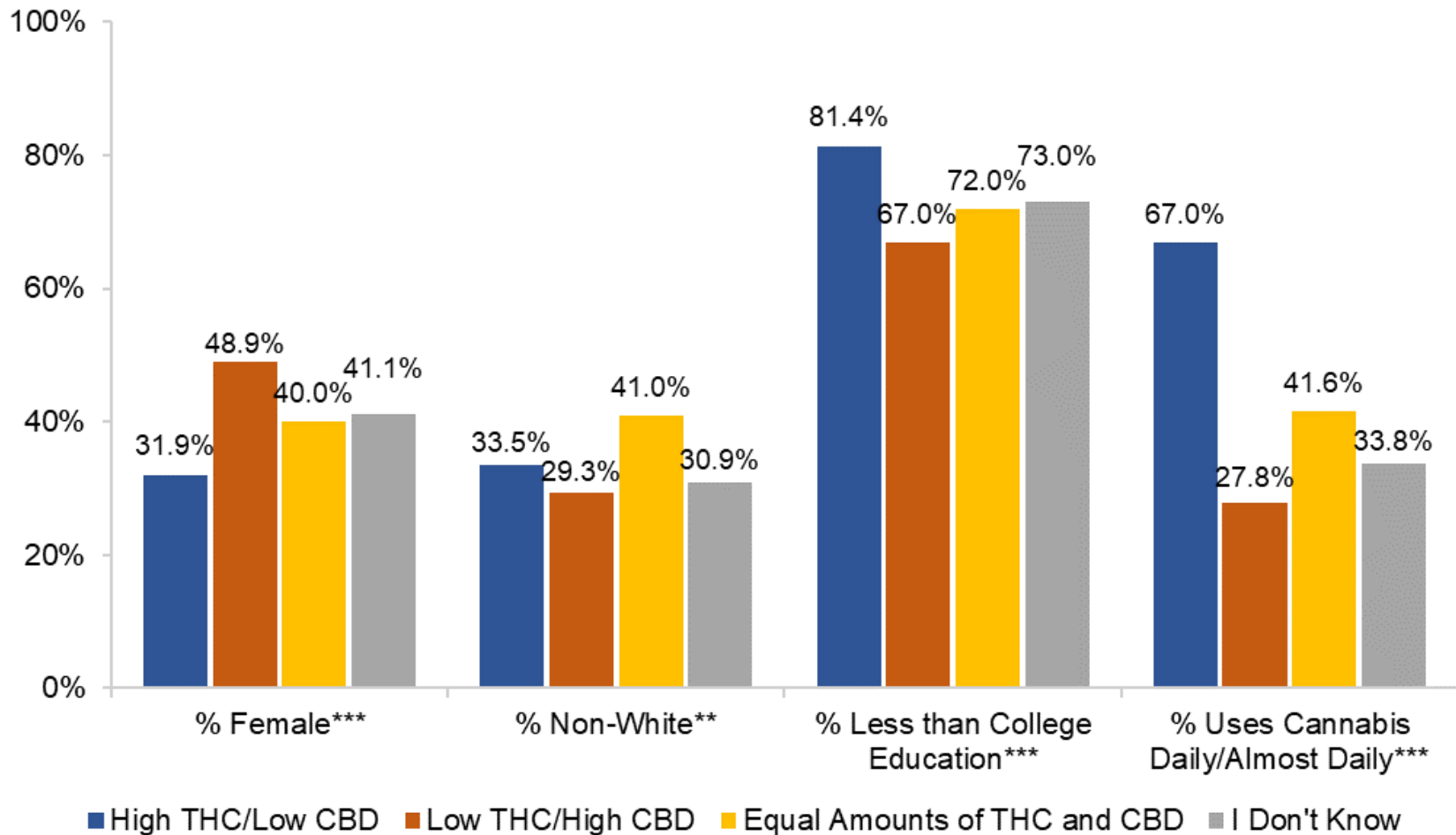
# Cannabis delivery types



# Cannabis delivery types

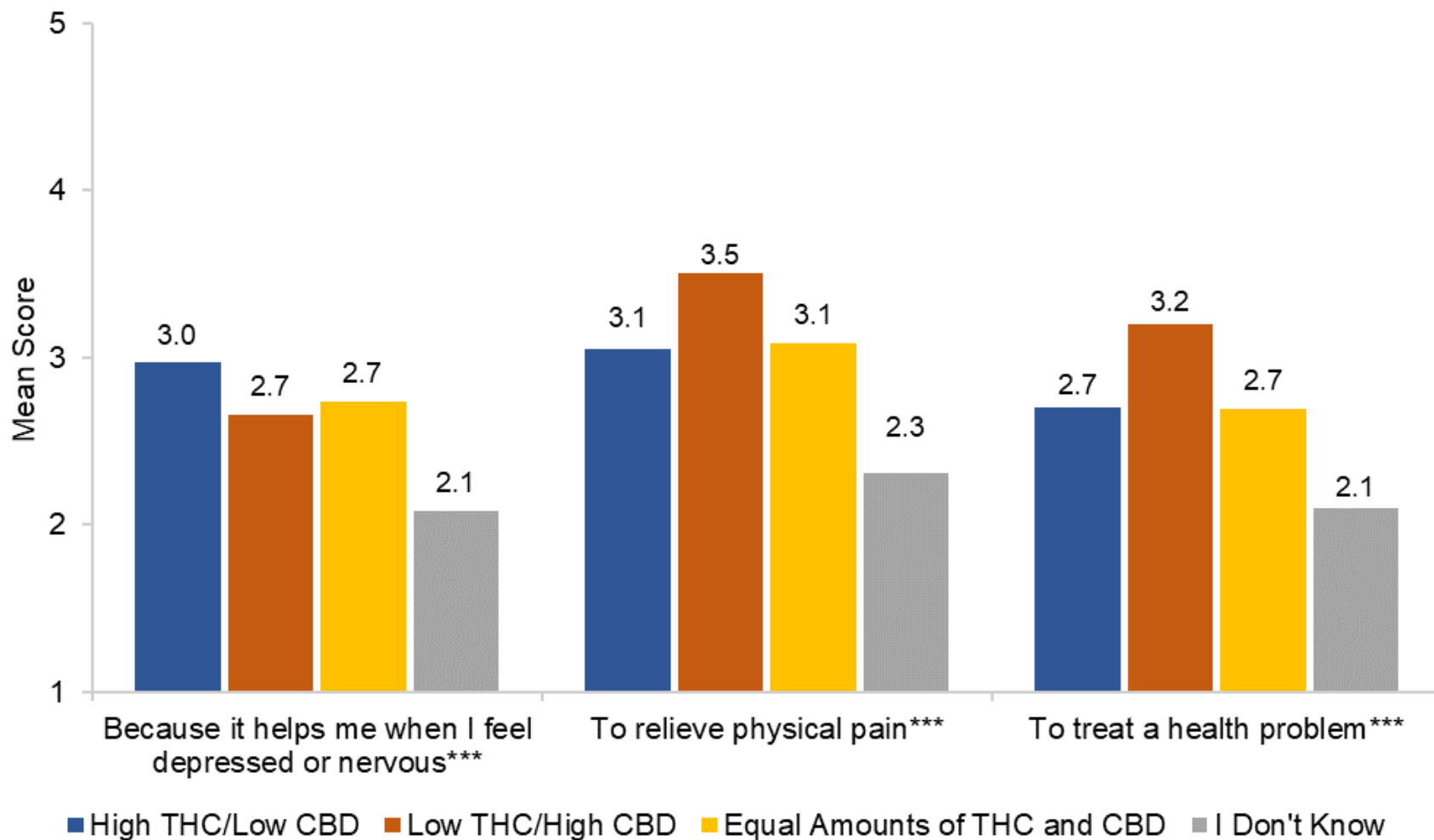


# THC-to-CBD ratio types: Demographics



\*p < 0.05 \*\*p < 0.01 \*\*\*p < 0.001

# THC-to-CBD ratio types: Cannabis Use Motives



\*p < 0.05 \*\*p < 0.01 \*\*\*p < 0.001

# Implications

# Regulation of cannabis and cannabis-derived compounds involves understanding both products and consumers

- Multiple modes of administration:
  - Mode of delivery (e.g. ingestion, absorption, inhalation) may affect safety and exposure
  - Concurrent use of multiple modes of delivery and/or co-delivery with other substances may adversely affect health
- Population use behaviors:
  - Vulnerable populations may face increased risks
    - Higher exposure to harmful or potentially harmful constituents
    - Mode of delivery effects
    - Interactions with other substances or co-morbid conditions
  - Company marketing may influence risks faced by some populations
    - Targeted marketing may result in disproportionate use patterns that increase risks for particular sub-populations

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**Thank you**