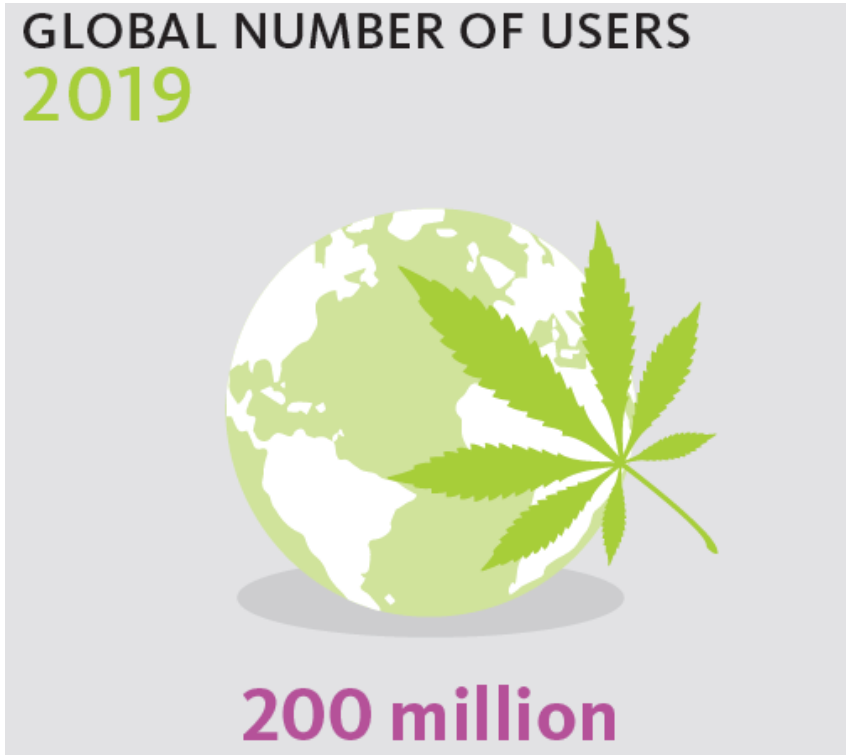


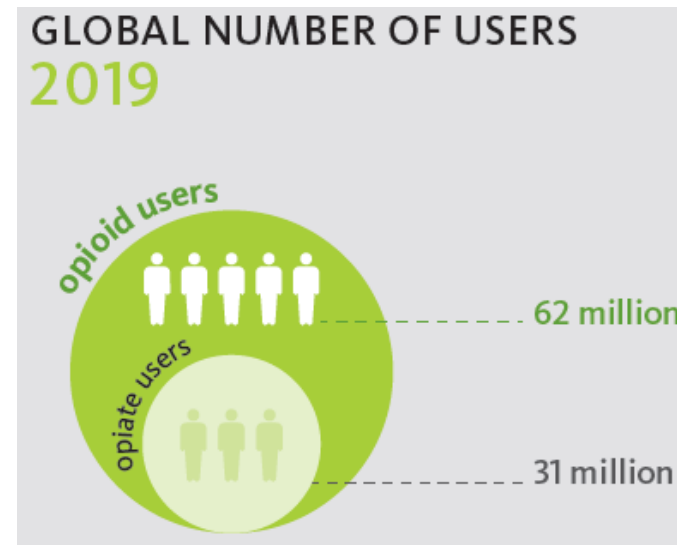
# DISTURBO DA USO DI CANNABIS: IMPLICAZIONI CLINICHE E TERAPEUTICHE

Sarah Vecchio

# CANNABIS: DIMENSIONI DEL FENOMENO

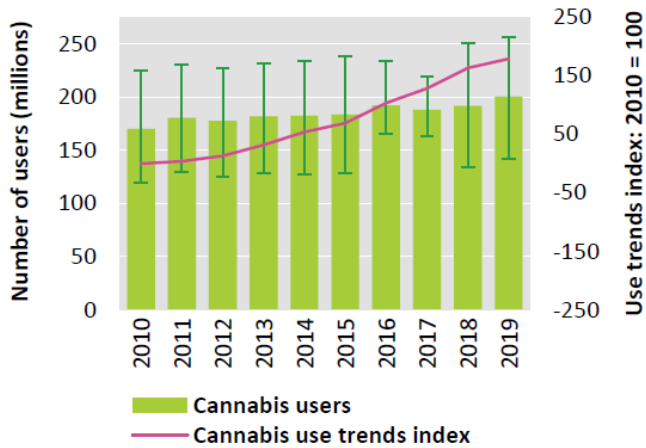


4% OF THE GLOBAL POPULATION AGED 15–64  
18% INCREASE BETWEEN 2010 AND 2019

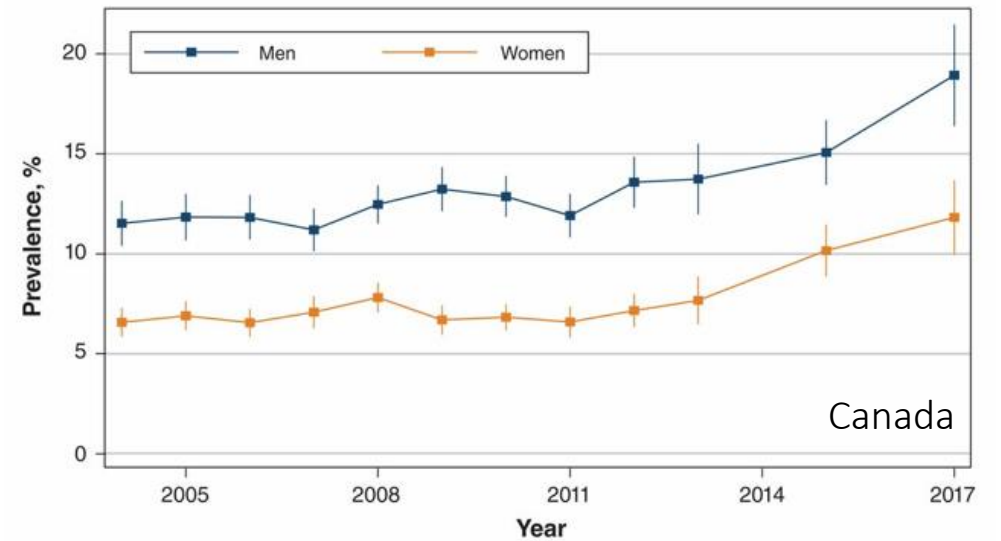
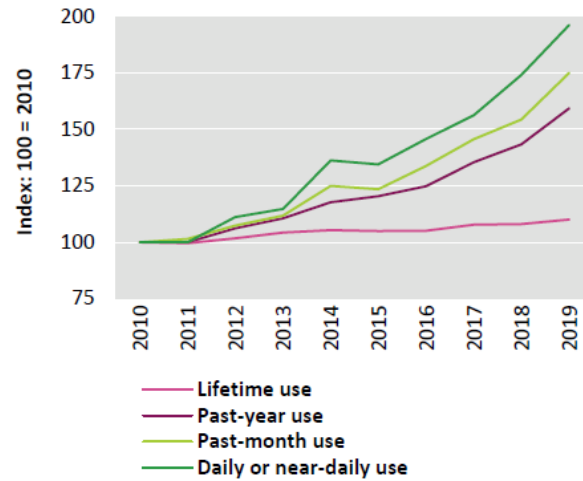


# CANNABIS: DIMENSIONI DEL FENOMENO

**FIG. 11** Trends in the global number of people who use cannabis and reported trends in cannabis use, 2010–2019

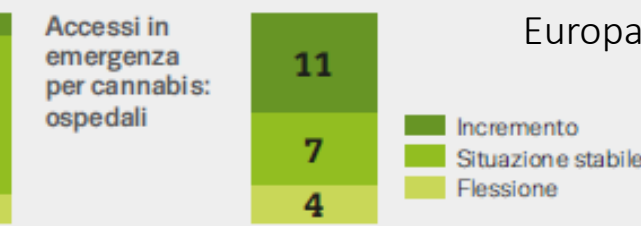
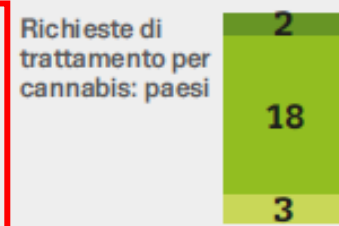
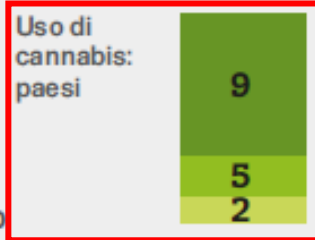


**FIG. 15** Trends in cannabis use among the population aged 18 and older, United States, 2010–2019



## Cambiamenti negli indicatori relativi alla cannabis

Numero di paesi od ospedali che hanno segnalato un cambiamento dopo l'ultima raccolta di dati

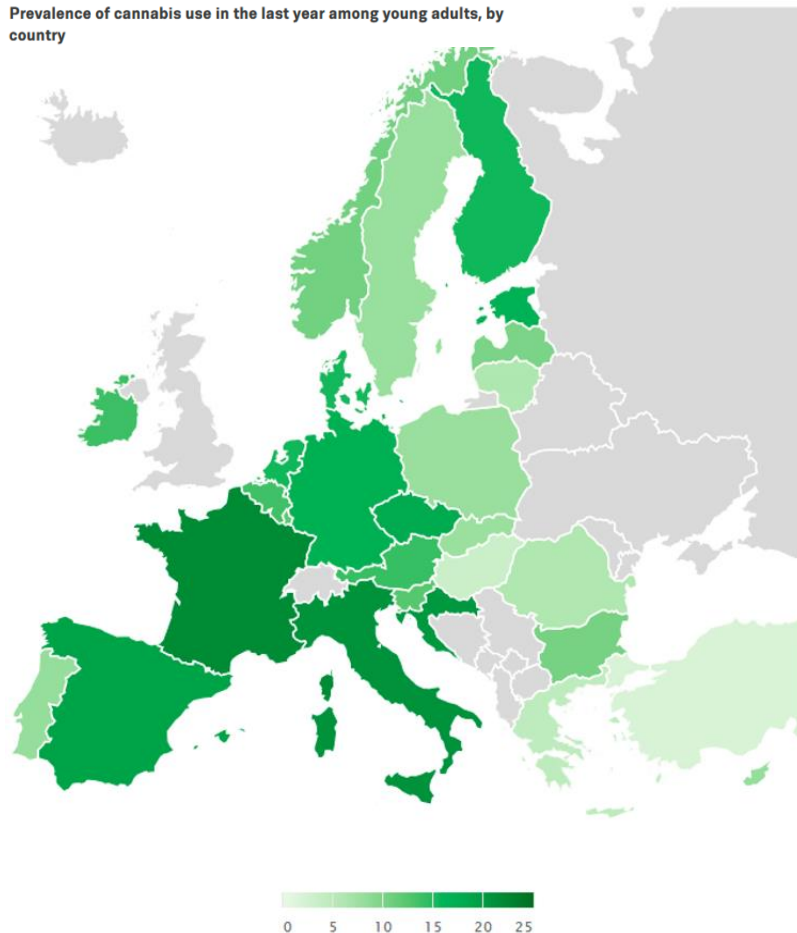


Usi di cannabis nell'ultimo anno tra i giovani adulti (15-34 anni), 2018/19 e indagini precedenti; prime richieste di trattamento correlate alla cannabis come droga primaria, 2018-19; accessi correlati alla cannabis negli ospedali Euro-DEN Plus, 2018-19.

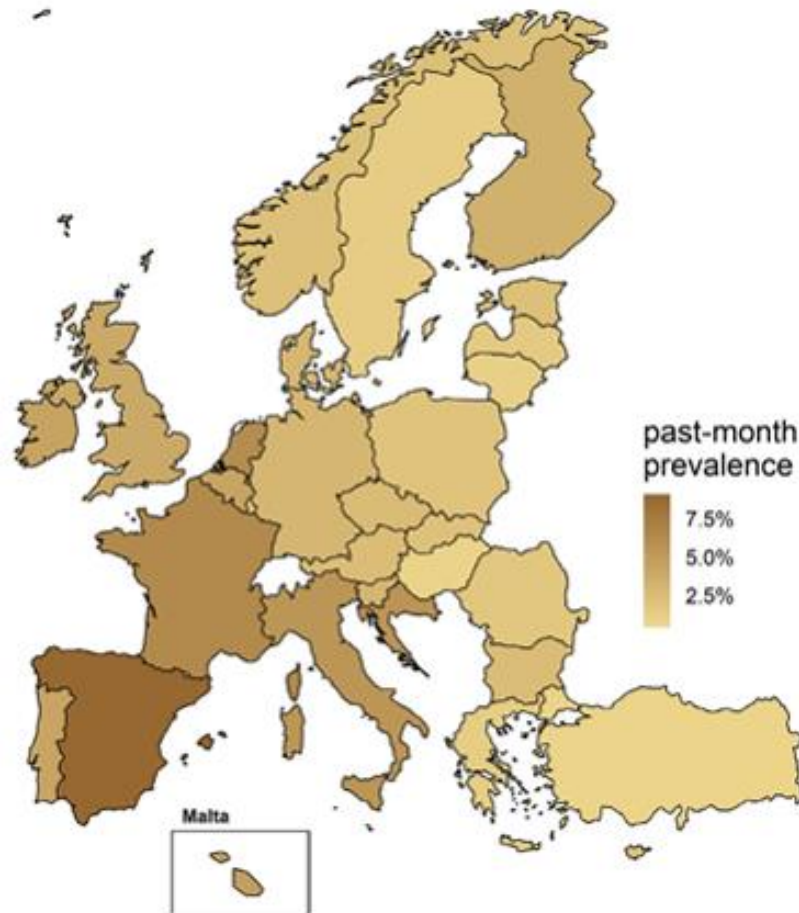
# CANNABIS: DIMENSIONI DEL FENOMENO

## PAST YEAR

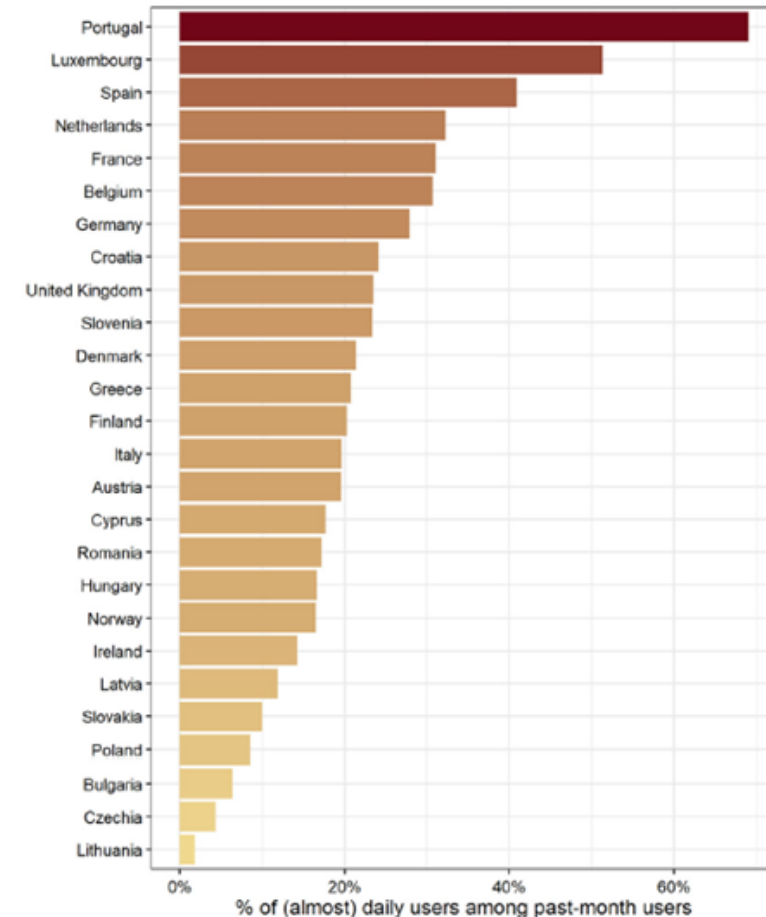
Prevalence of cannabis use in the last year among young adults, by country



## PAST MONTH



## ALMOST DAILY





# CANNABIS: DIMENSIONI DEL FENOMENO

Tabella 1.1.1 - Spesa per consumi finali di droga per tipologia di sostanza stupefacente (valori in miliardi di euro)

|               | 2016        | 2017        | 2018        |
|---------------|-------------|-------------|-------------|
| Eroina        | 2,9         | 2,8         | 3,1         |
| Cocaina       | 4,5         | 4,9         | 5,1         |
| Cannabis      | 6,0         | 6,3         | 6,3         |
| Altro         | 1,7         | 1,8         | 1,7         |
| <b>TOTALE</b> | <b>15,0</b> | <b>15,8</b> | <b>16,2</b> |

Fonte: ISTAT - Anni 2016 - 2018

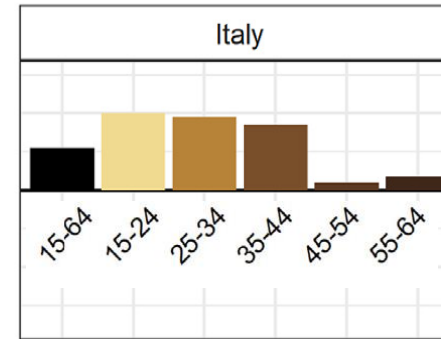


Figura 3.1.2 - Uso di sostanze psicoattive nella vita

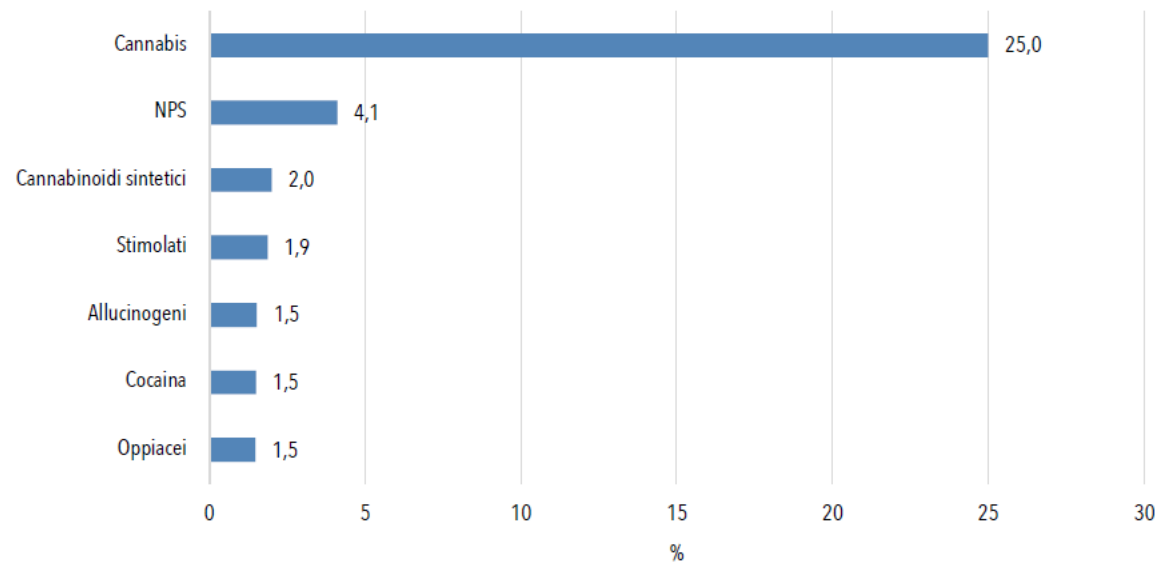
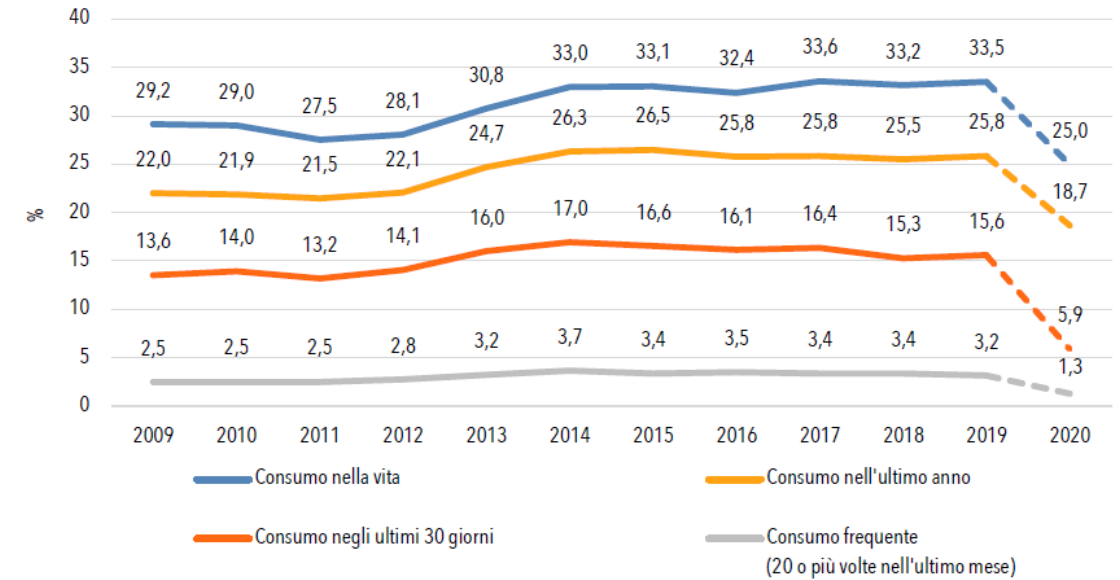
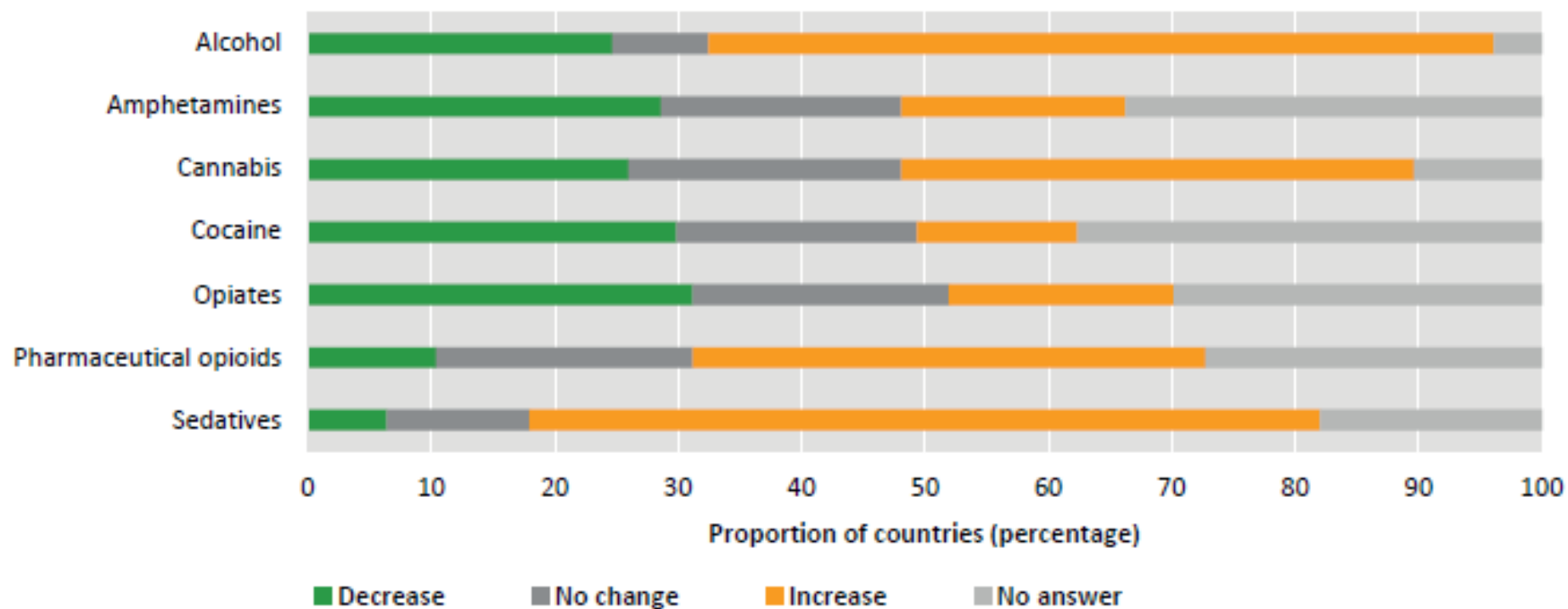


Figura 3.1.3 - Consumi di cannabis nella popolazione studentesca: trend percentuale

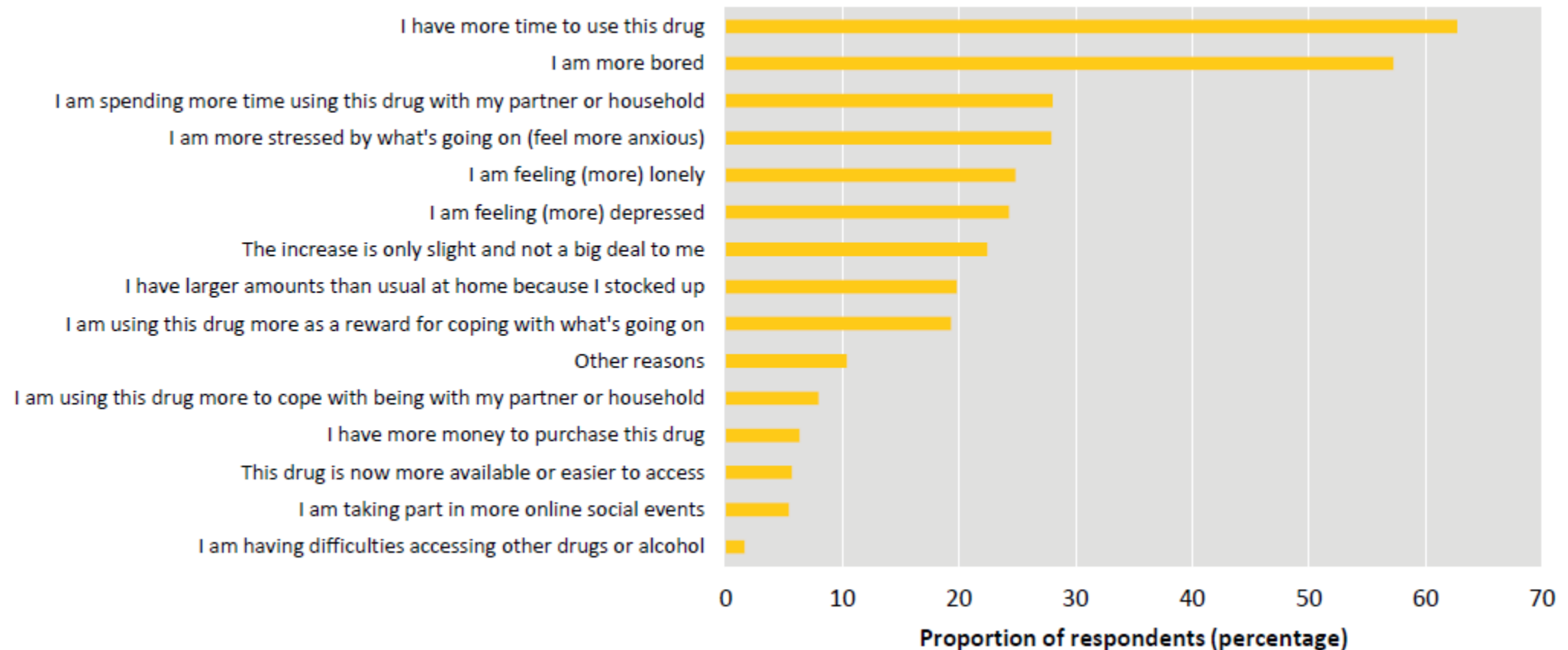


**FIG. 24** Trends in drug use during the early stages of the COVID-19 pandemic, as reported by national addiction medicine professionals, by substance, April–May 2020



Source: Ali Farhoudian and others, "A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic", *MedRxiv* (2020).

**FIG. 29** Reasons given by cannabis users for their increased use of cannabis after the onset of the COVID-19 pandemic, May–June 2020



Source: Global Drug Survey, "GDS COVID-19 special edition".

# CANNABIS E DARKNET

FIG. 48 Distribution of drug transactions on 19 major darknet markets, by drug, 2011–mid-2017 and mid-2017–2020

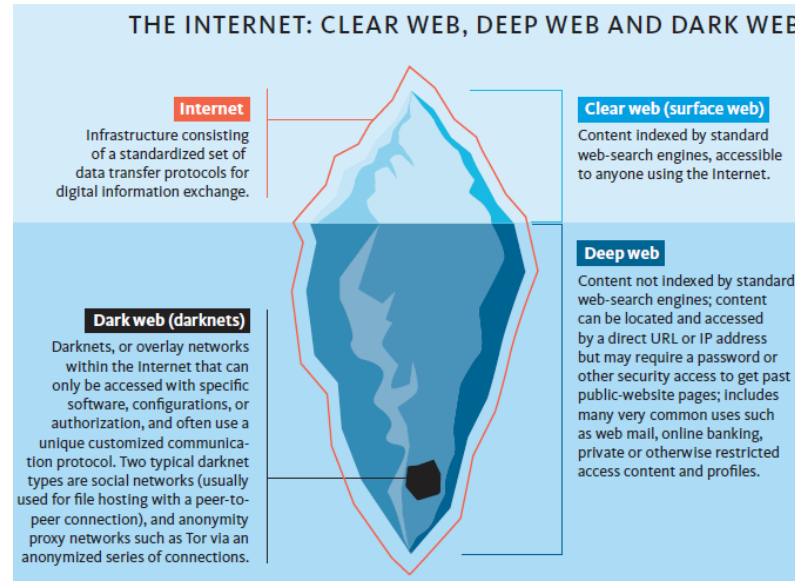
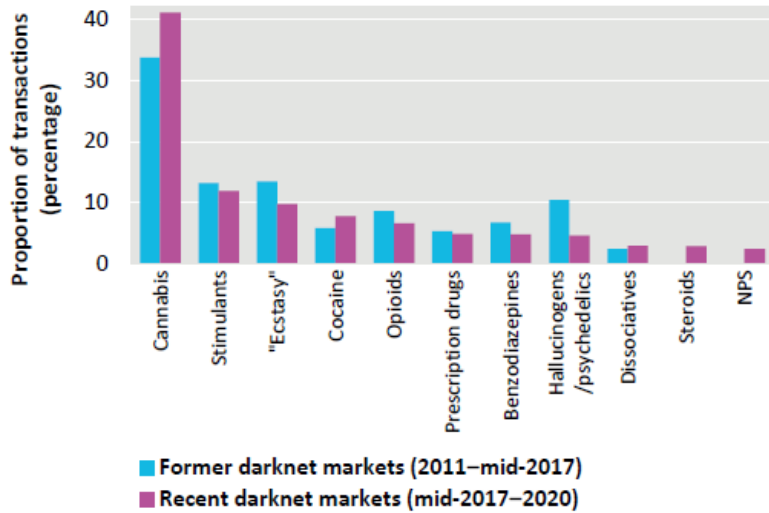


FIG. 60 Minimum drug sales on nine major global darknet markets, by drug type, 2019 and 2020

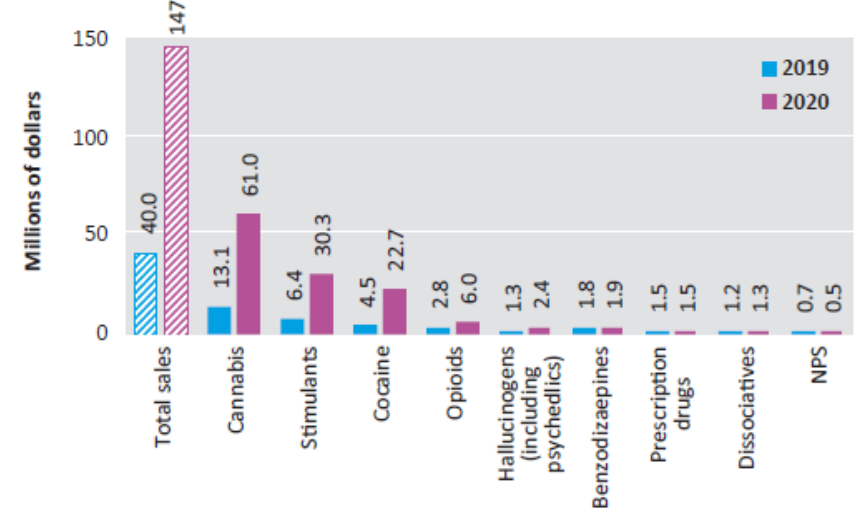
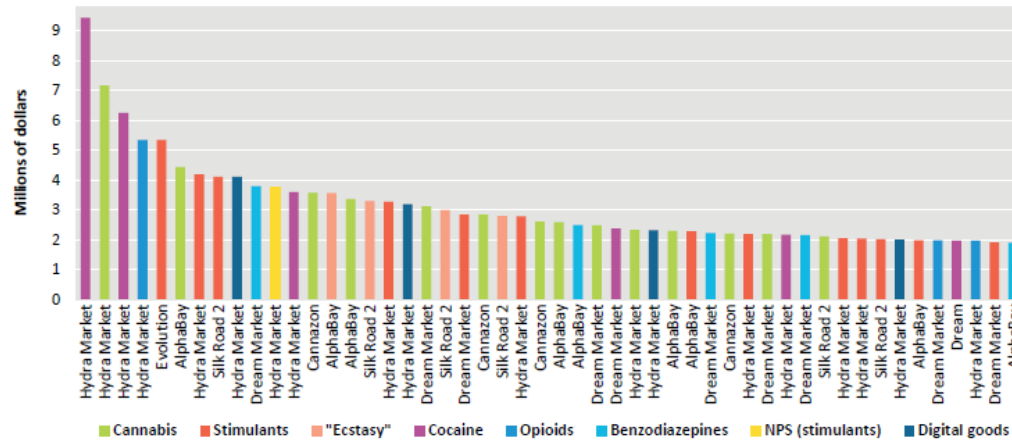


FIG. 51 Total minimum sales by the "top" 50 vendors (in terms of sales) operating on 19 major darknet markets, 2011–2020





# INCREMENTO DELLA DIFFUSIONE DI CANNABIS

## ELEVATA ACCETTABILITÀ SOCIALE

- Cannabis ad uso ricreazionale
- Cannabis ad uso terapeutico
- Cannabis light
- Industria della canapa (alimentare, tessile etc)

## POLICIES DI DEPENALIZZAZIONE/LEGALIZZAZIONE

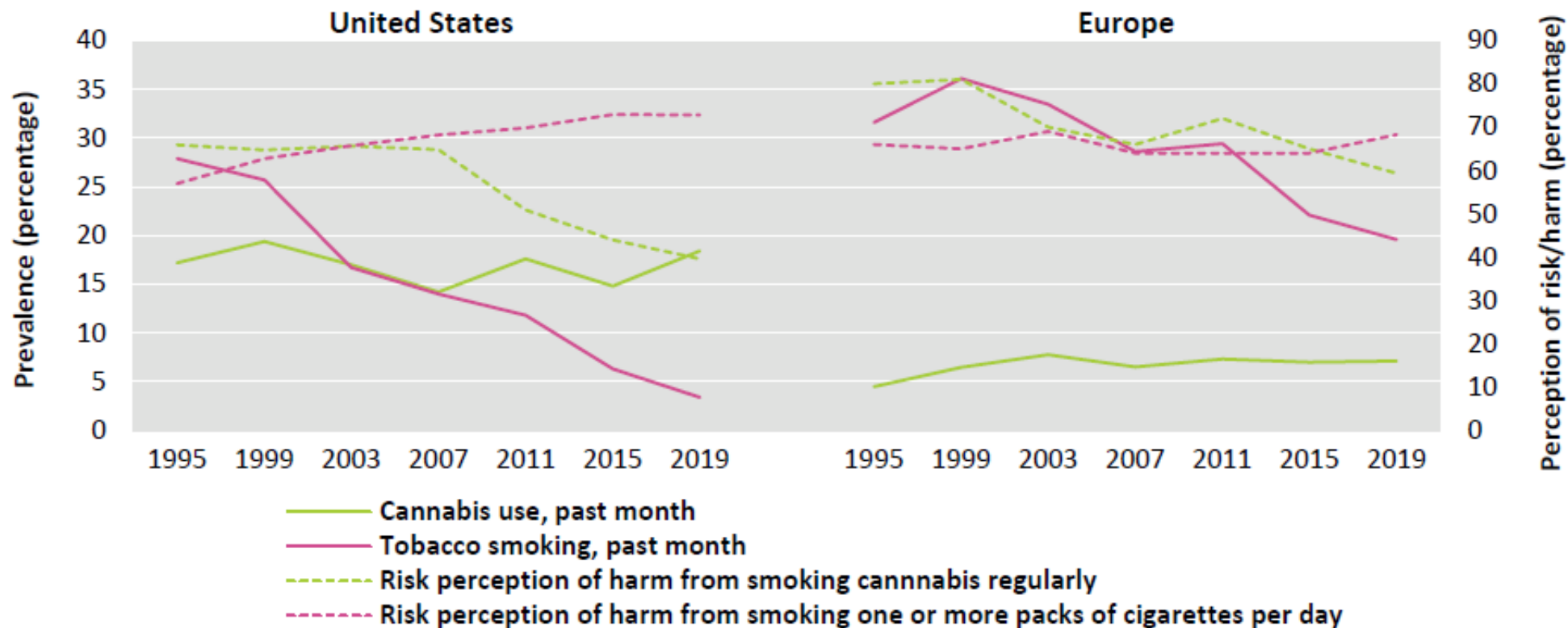
## NUOVE MODALITÀ DI CONSUMO

## RIDUZIONE DEI PREZZI



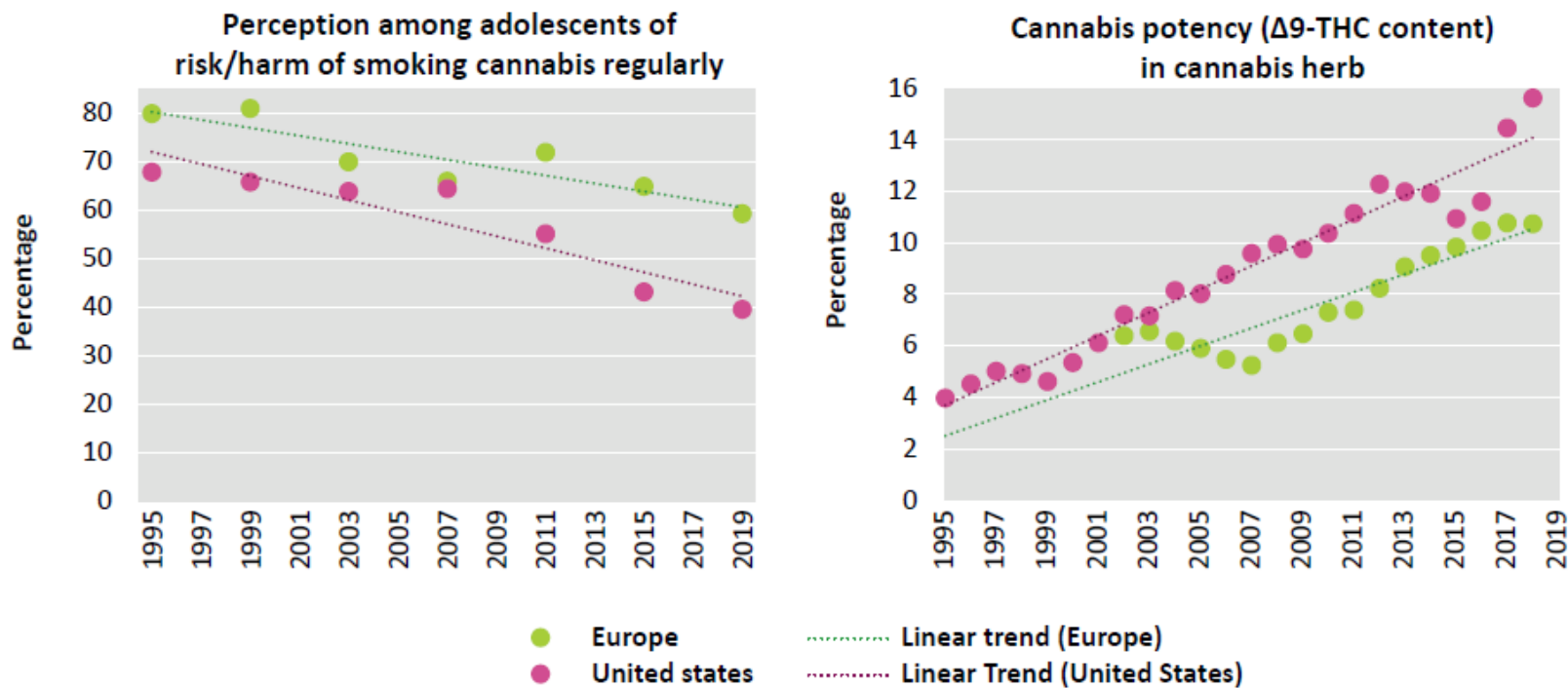
# CANNABIS: PERCEZIONE DEL RISCHIO

**FIG. 26** Trends in cigarette smoking, cannabis use and risk perceptions related to smoking cigarettes and the use of cannabis among adolescents in the United States (10th grade) and Europe (aged 15–16), 1995–2019

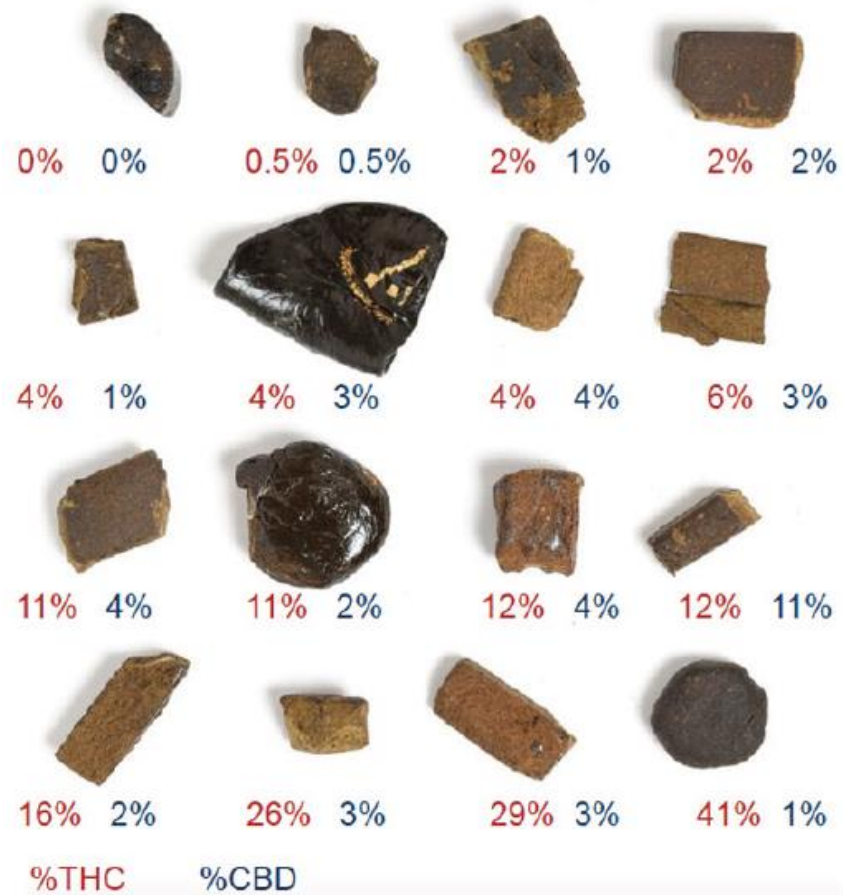


# CANNABIS: INCREMENTO DELLA POTENZA ( $\Delta 9$ -THC)

**FIG. 27** Potency of cannabis and perception of risk from cannabis use among adolescents, Europe and United States, 1995–2019

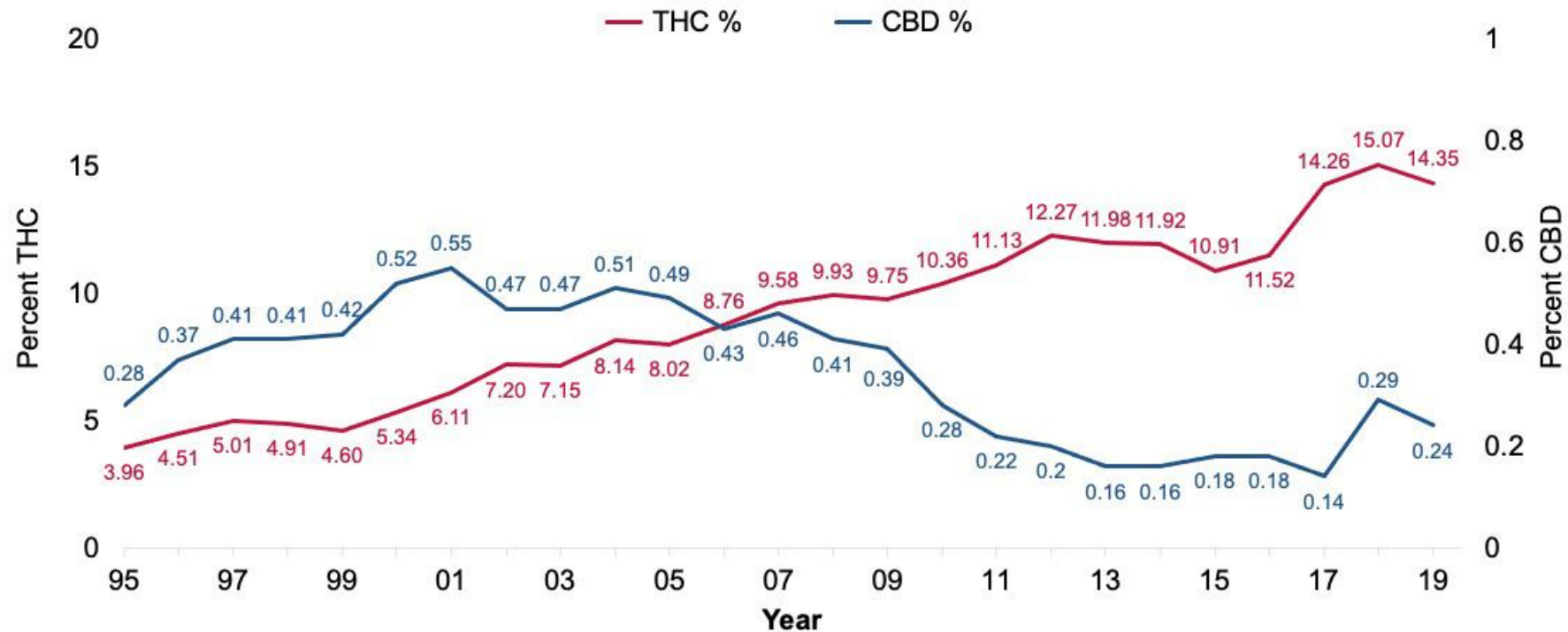


Cannabis resin samples from police seizures in England, 2016.



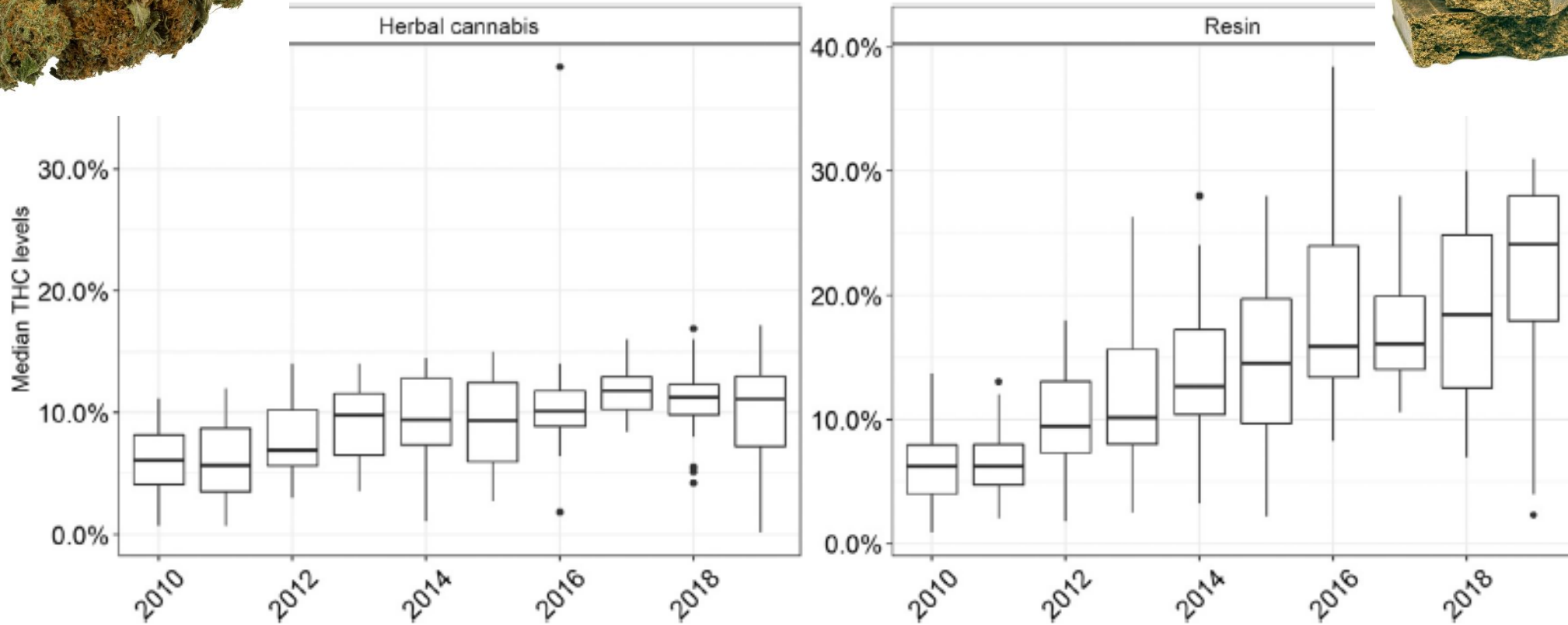
# CANNABIS: INCREMENTO DELLA POTENZA ( $\Delta 9$ -THC)

## Percentage of THC and CBD in cannabis samples seized by the DEA from 1995-2019



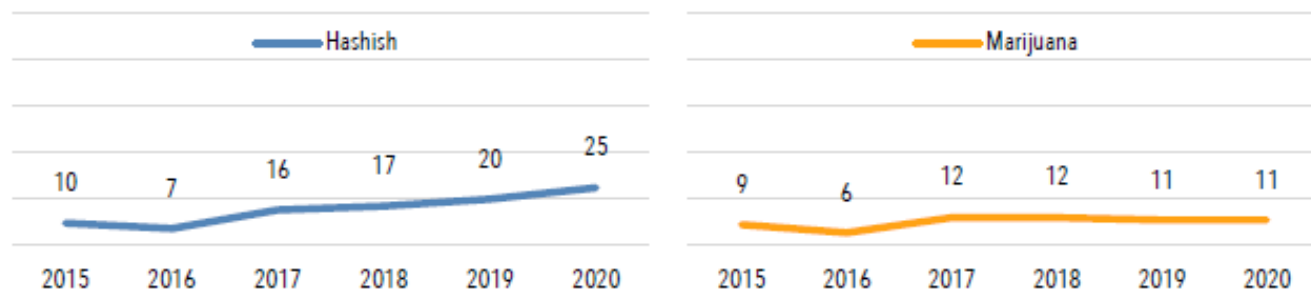


# CANNABIS: INCREMENTO DELLA POTENZA ( $\Delta 9$ -THC)



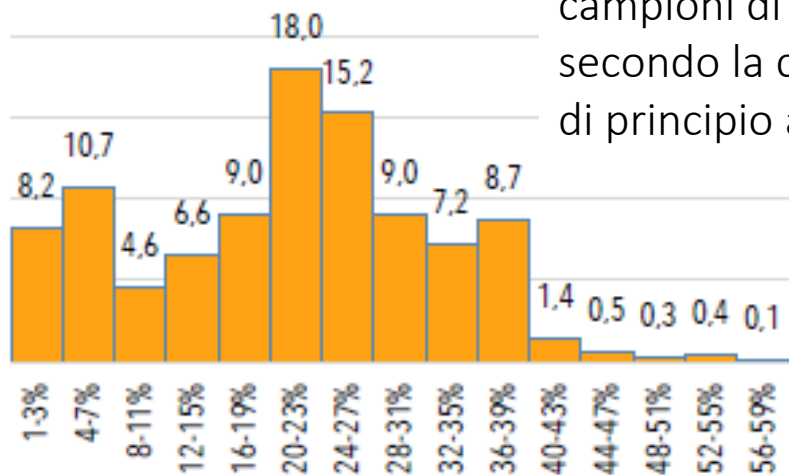
# CANNABIS: INCREMENTO DELLA POTENZA ( $\Delta 9$ -THC)

Figura 1.3.2 - Percentuali di principio attivo rilevate sulle sostanze stupefacenti analizzate



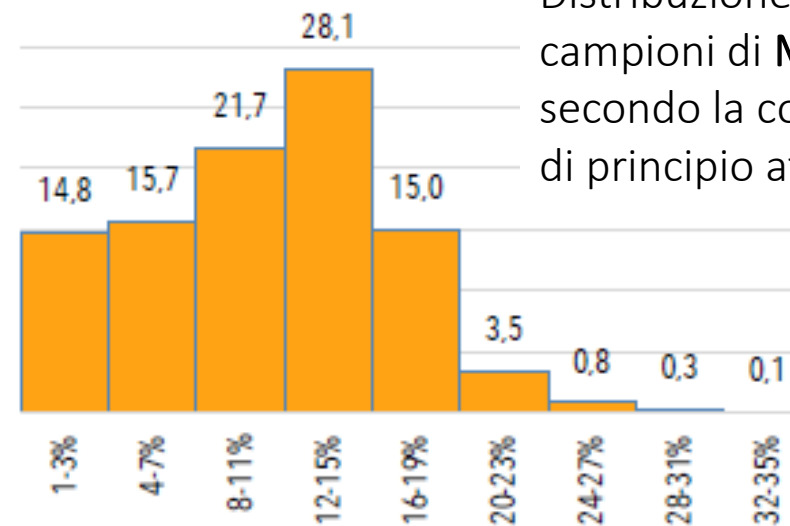
## ITALIA

Distribuzione assoluta dei campioni di **HASHISH** secondo la concentrazione di principio attivo rilevato



## ITALIA

Distribuzione assoluta dei campioni di **MARIJUANA** secondo la concentrazione di principio attivo rilevato



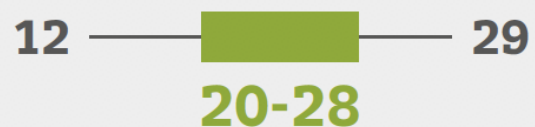
# IL MERCATO DELLA CANNABIS

## RESIN

**Price** (EUR/g)

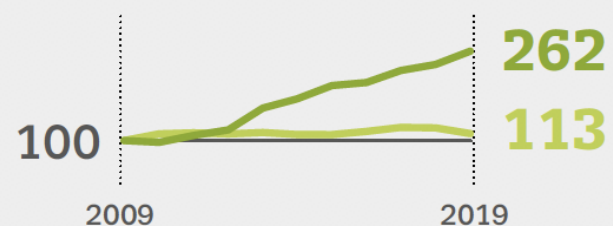


**Potency** (% THC)



**Indexed trends**

Price and potency



## HERB

**Price** (EUR/g)

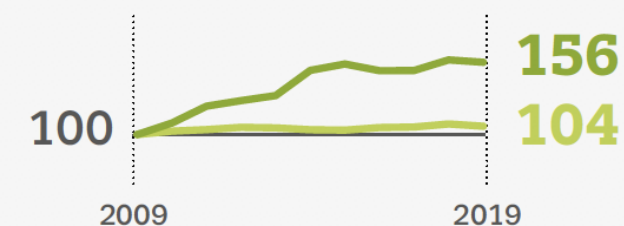


**Potency** (% THC)



**Indexed trends**

Price and potency



# CANNABIS: PATTERN DI CONSUMO



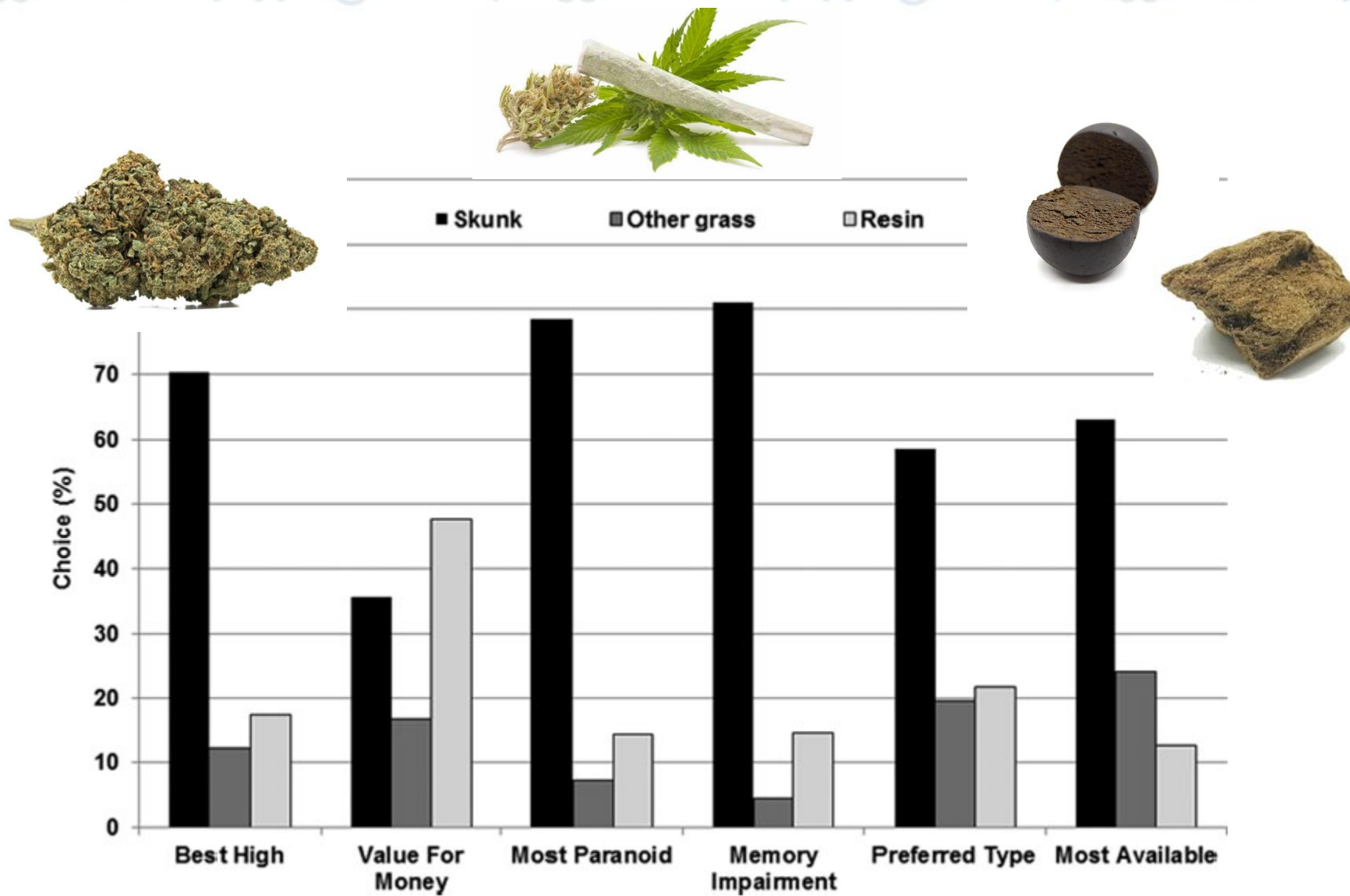
**Table 2** Heterogeneity in methods of administration of cannabis products.

| <i>Method</i> | <i>Route</i>       | <i>Combined with nicotine or tobacco</i> |
|---------------|--------------------|--|
| Joint         | Inhaled, combusted | Yes/no                                   |
| Pipe          | Inhaled, combusted | Yes/no                                   |
| Blunt         | Inhaled, combusted | Yes                                      |
| Bong          | Inhaled, combusted | Yes/no                                   |
| Dabbing       | Inhaled, combusted | Yes/no                                   |
| Vaporizer     | Inhaled, vaporized | Yes/no                                   |
| Vape pen      | Inhaled, vaporized | Yes/no                                   |
| Edible        | Oral               | No                                       |
| Liquid        | Oral               | No                                       |

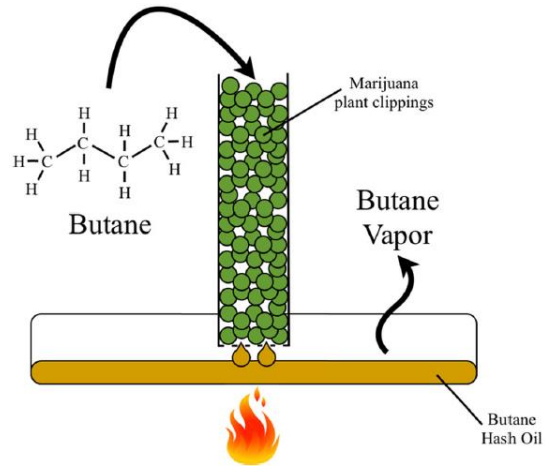
| <i>Country, year</i> | <i>Reference</i> | <i>Outdoor-grown herbal</i> | <i>Indoor-grown herbal</i> | <i>Resin</i>      | <i>Concentrates</i> |
|----------------------|------------------|-----------------------------|----------------------------|-------------------|---------------------|
| USA, 2017            | [22]             | 9% THC, < 1% CBD            | 18% THC, < 1% CBD          | 46% THC, < 1% CBD | 56% THC, < 1% CBD   |
| Australia, 2010–12   | [23]             | 15% THC, < 1% CBD           | 19% THC, < 1% CBD          | –                 | –                   |
| UK, 2015–16          | [24]             | 3% THC, < 1% CBD            | 14% THC, < 1% CBD          | 6% THC, 2% CBD    | 78% THC, < 1% CBD   |
| Netherlands, 2015    | [25]             | 5% THC, < 1% CBD            | 15% THC, < 1% CBD          | 18% THC, 8% CBD   | –                   |
| France, 2016         | [26]             | –                           | –                          | 23% THC, 4% CBD   | –                   |
| Denmark, 2017        | [27]             | –                           | –                          | 23% THC, 6% CBD   | –                   |



# CANNABIS: PATTERN DI CONSUMO

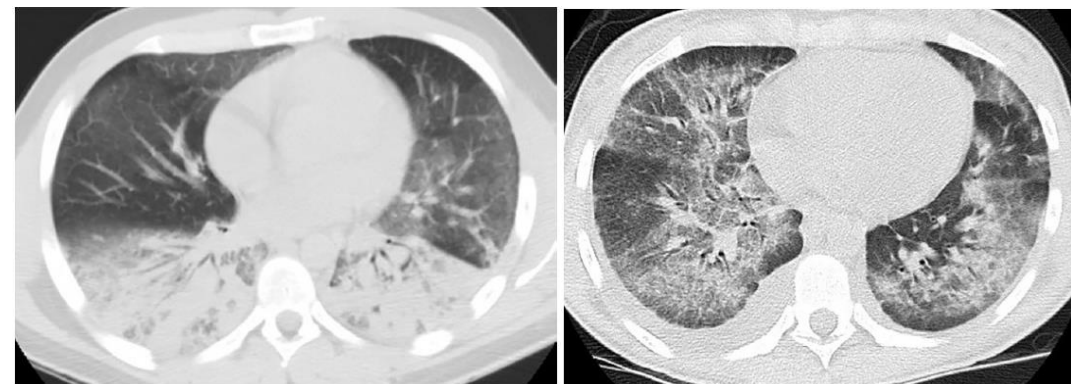
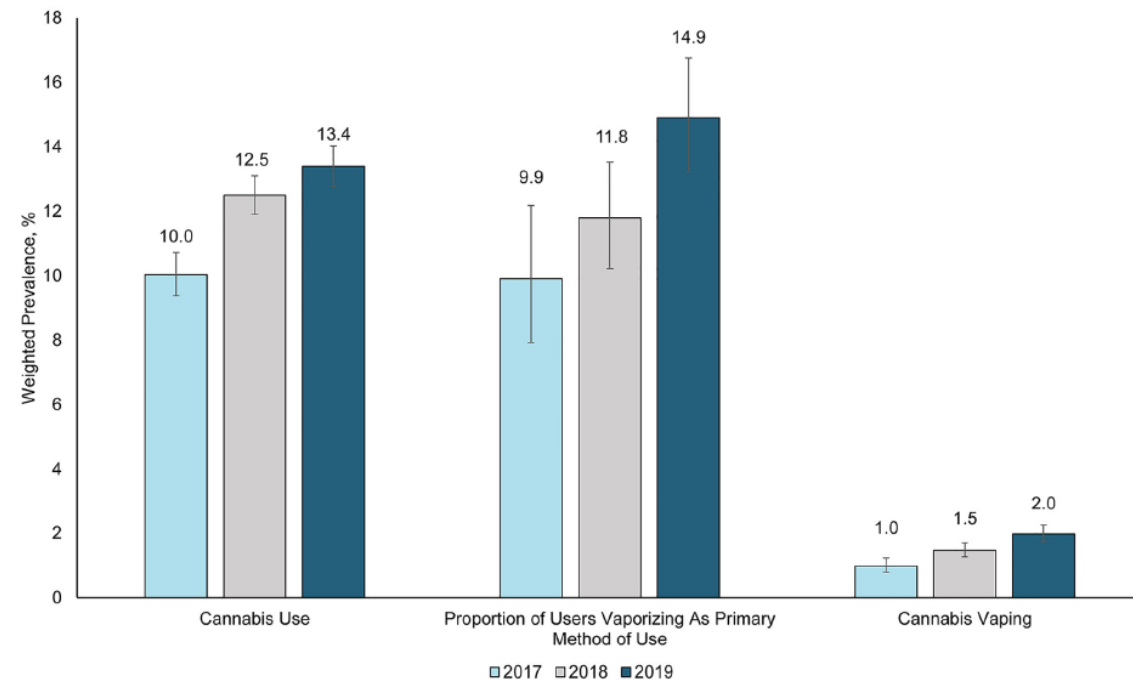


# BUTANE HASH OIL (BHO, Wax...) e DABBING





# VAPING



Chadi N, Minato C, Stanwick R. Cannabis vaping: Understanding the health risks of a rapidly emerging trend. *Paediatr Child Health*. 2020 Jun;25(Suppl 1):S16-S20

Adapa S et al. Cannabis Vaping-Induced Acute Pulmonary Toxicity: Case Series and Review of Literature. *J Investig Med High Impact Case Rep*. 2020

Boakye E et al. Cannabis vaping among adults in the US: Prevalence, trends, and association with high-risk behaviors and adverse respiratory conditions. *Prev Med*. 2021

# VAPING

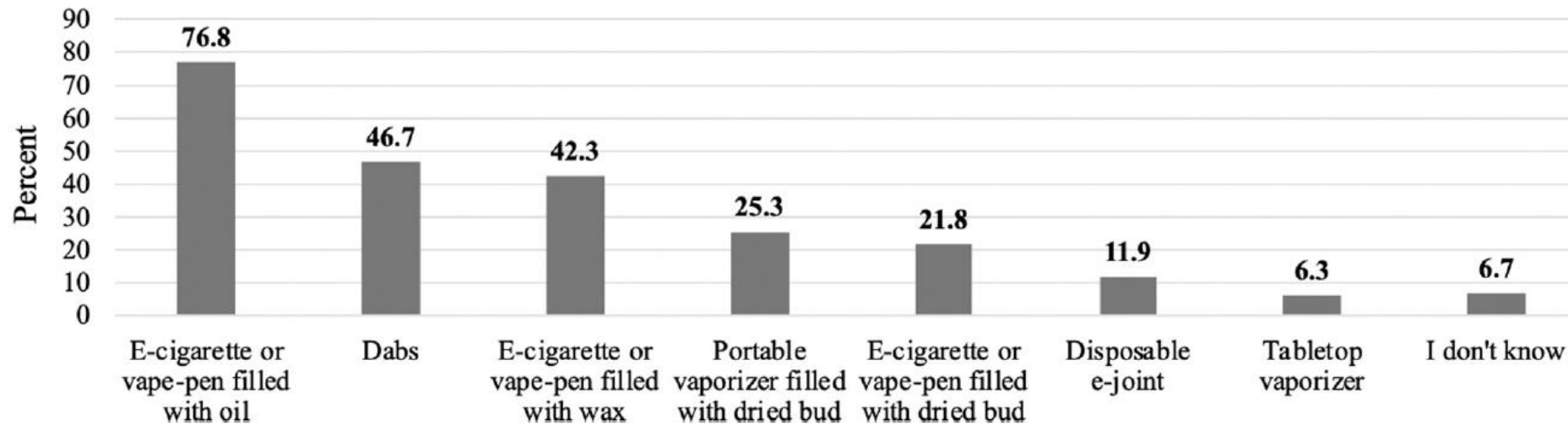


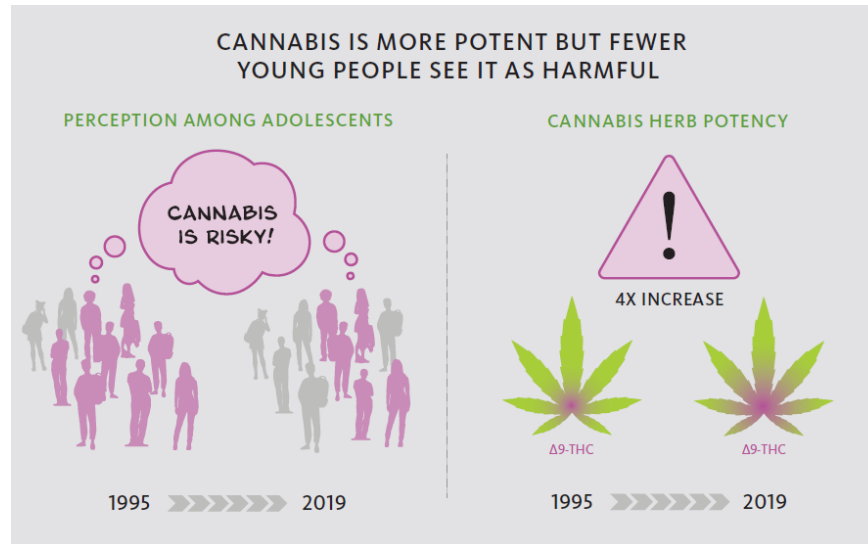
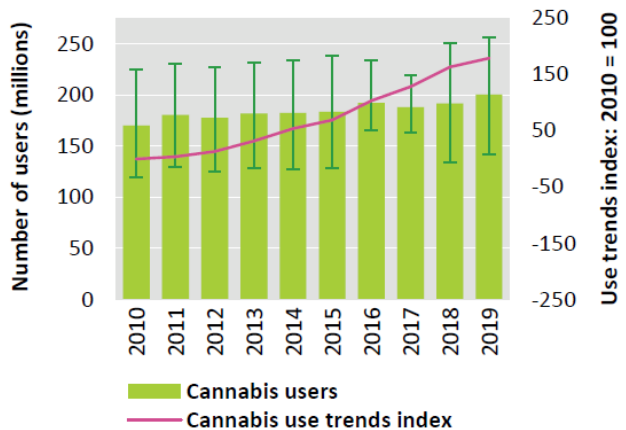
Fig. 2. Endorsement of lifetime modalities of vaporizing cannabis among past-month cannabis vapers (n = 524).





# IMPATTO DELLE NUOVE TENDENZE?

FIG. 11 Trends in the global number of people who use cannabis and reported trends in cannabis use, 2010–2019



INCREMENTO  
DELLA  
DIFFUSIONE

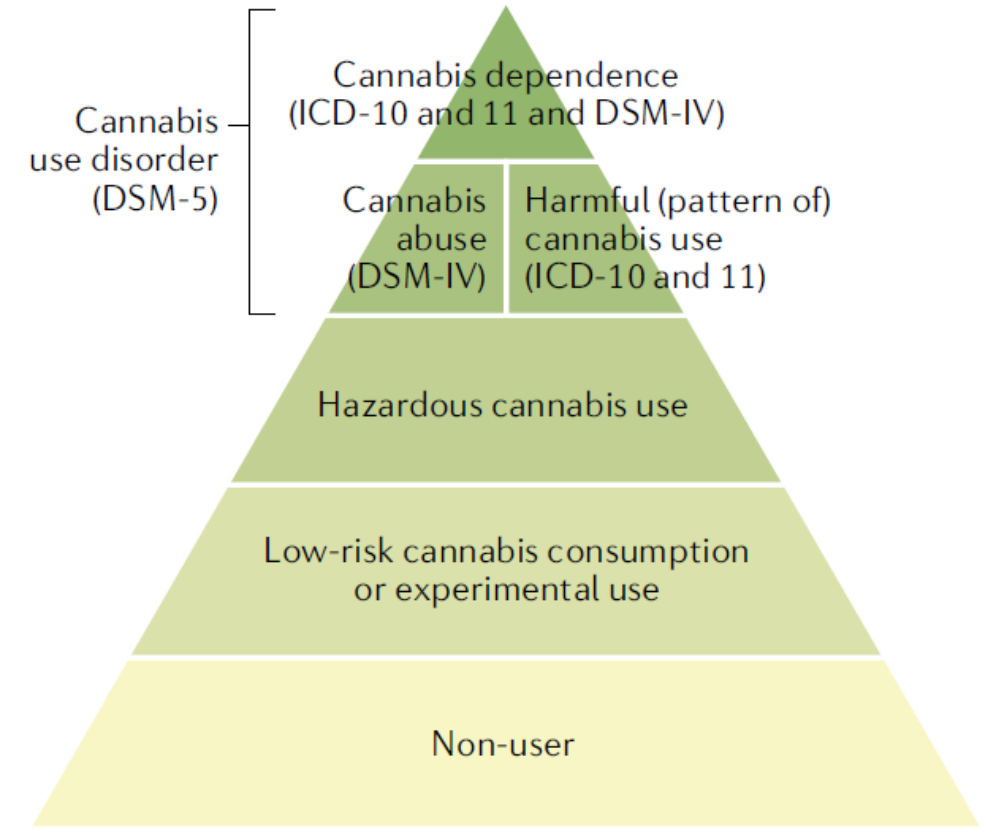
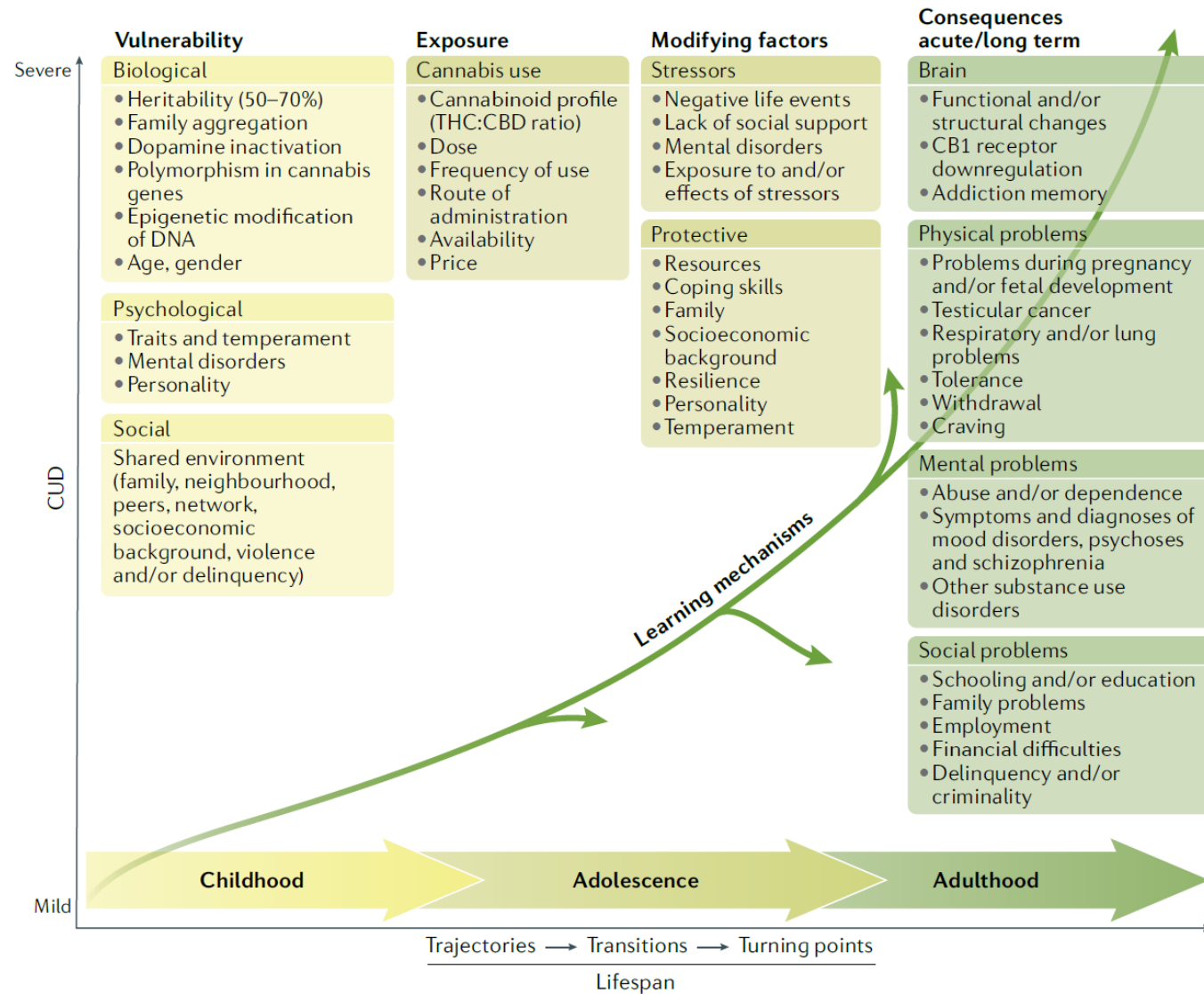
RIDUZIONE  
PERCEZIONE  
DEL RISCHIO

INCREMENTO  
DELLA  
POTENZA

INCREMENTO  
DISTURBO DA USO  
DI CANNABIS (CUD)



# CUD: MODELLO MULTIFATTORIALE E GERARCHIA DIAGNOSTICA



# DISTURBO DA USO DI CANNABIS (CUD)

| Broad domain  | DSM-5 CUD 'diagnostic criteria' <sup>4</sup>   | ICD-11 Cannabis dependence 'description' <sup>5</sup>   |
|---|--|---|
| Impaired control  | 1 <sup>a</sup> Cannabis is taken in larger amounts or over longer periods than intended  | "Cannabis dependence is a disorder of regulation of cannabis use arising from repeated or continuous use of cannabis. The characteristic feature is a strong internal drive to use cannabis, which is manifested by impaired ability to control use..."   |
|   | 2 <sup>a</sup> There is a persistent desire or unsuccessful attempts to cut down or control cannabis use   |   |
|   | 3 <sup>a</sup> A great deal of time spent in activities necessary to obtain cannabis, use cannabis or recover from its effects   |   |
|   | 4 Craving, or a strong desire or urge to use cannabis  |   |
| Increasing priority resulting in social and physical risk | 5 Recurrent cannabis use resulting in a failure to fulfil major role obligations at work, school or home   | "...and persistence of use despite harm or negative consequences."  |
|   | 6 Continued cannabis use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of cannabis  | "...and persistence of use despite harm or negative consequences."  |
|   | 7 <sup>a</sup> Important social, occupational, or recreational activities are given up or reduced because of cannabis use  | "...increasing priority given to use over other activities..."  |
|   | 8 Recurrent cannabis use in situations in which it is physically hazardous   | "...and persistence of use despite harm or negative consequences."  |
|   | 9 <sup>a</sup> Cannabis use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by cannabis | "...and persistence of use despite harm or negative consequences."  |
| Physiological dependence                                  | 10 <sup>a</sup> Tolerance, as evidenced by a markedly diminished effect  | "Physiological features of dependence may also be present, including tolerance to the effects of cannabis, withdrawal symptoms following cessation or reduction in use of cannabis, or repeated use of cannabis or pharmacologically similar substances to prevent or alleviate withdrawal symptoms." |
|   | 11 <sup>a</sup> Withdrawal syndrome, or drinking to prevent withdrawal   |   |

Un pattern problematico di uso di cannabis che porta a disagio o compromissione clinicamente significativi, come manifestato da almeno due delle seguenti condizioni, che si verificano entro un periodo di 12 mesi

## Gravità CUD

- CUD lieve: 2–3 condizioni
- CUD moderato: 4–5 condizioni
- CUD grave: ≥6 condizioni

## DSM-5 specificatori

- Remissione precoce: 3–12 mesi
- Remissione protratta: >12 mesi

# CUD: ASTINENZA

## Criteria diagnostici

- A. Cessazione dell'uso di cannabis che è stato pesante e prolungato.
- B. Tre (o più) dei seguenti segni e sintomi, che si sviluppano approssimativamente entro 1 settimana dopo il Criterio A:
  1. Irritabilità, rabbia, aggressività
  2. Nervosismo, ansia
  3. Difficoltà del sonno (per es., insonnia, sogni inquietanti)
  4. Diminuzione dell'appetito o perdita di peso
  5. Irrequietezza
  6. Umore depresso
  7. Almeno uno dei seguenti sintomi fisici causa malessere significativo: dolori addominali, instabilità/tremori, sudorazione, febbre, brividi, cefalea
- C. I segni o sintomi causano disagio clinicamente significativo o compromissione del funzionamento in ambito sociale, lavorativo o in altre aree importanti.
- D. I segni o sintomi non sono attribuibili a un'altra condizione medica e non sono meglio spiegati da un altro disturbo mentale.



# CUD: INTOSSICAZIONE ACUTA

## Criteria diagnostici

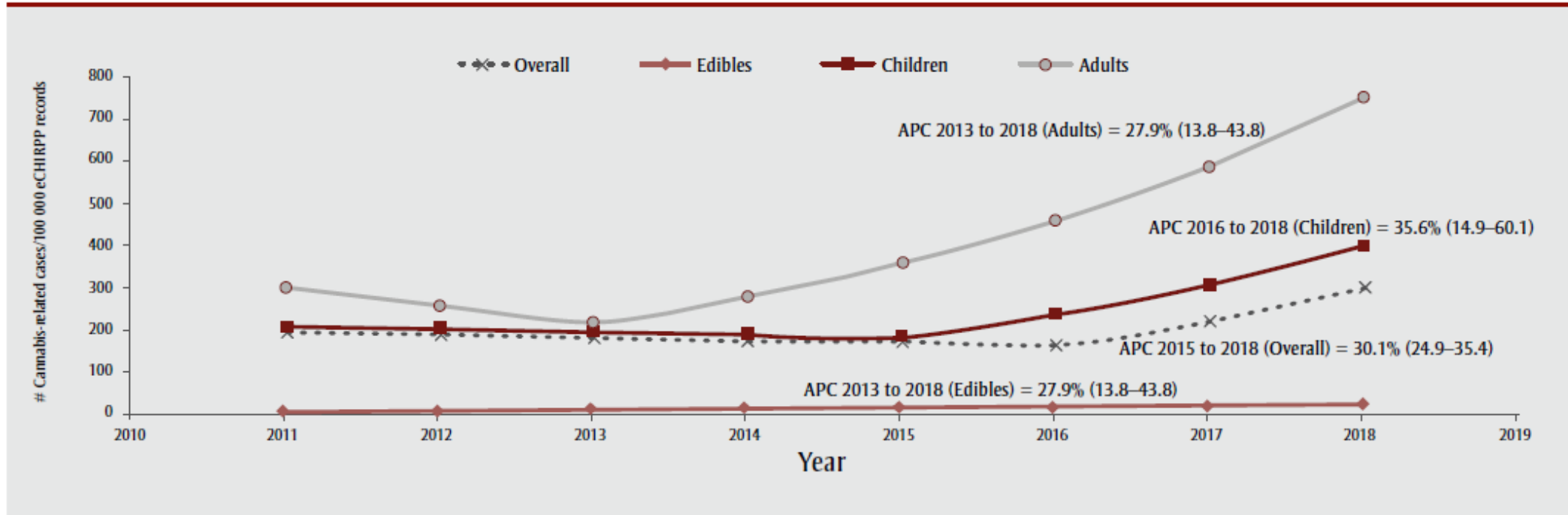
- A. Recente uso di cannabis.
- B. Comportamento problematico clinicamente significativo o cambiamenti psicologici (per es., coordinazione motoria compromessa, euforia, ansia, sensazione di rallentamento del tempo, capacità critica compromessa, isolamento sociale) che si sviluppano durante, o subito dopo, l'uso della cannabis.
- C. Due (o più) dei seguenti segni o sintomi, che si sviluppano entro 2 ore dall'uso della cannabis:
  - 1. Iperemia congiuntivale.
  - 2. Aumento dell'appetito.
  - 3. Secchezza delle fauci.
  - 4. Tachicardia.
- D. I segni o sintomi non sono attribuibili a un'altra condizione medica e non sono meglio spiegati da un altro disturbo mentale, compresa intossicazione da altra sostanza.

*Specificare se:*

**Con alterazioni percettive:** Allucinazioni con esame di realtà integro o illusioni uditive, visive o tattili che si verificano in assenza di un delirium.

# CUD: INTOSSICAZIONE ACUTA

Time trend of cannabis-related cases presenting to emergency departments, children, adults and overall cases, eCHIRPP, 2011 to 2018<sup>a</sup>



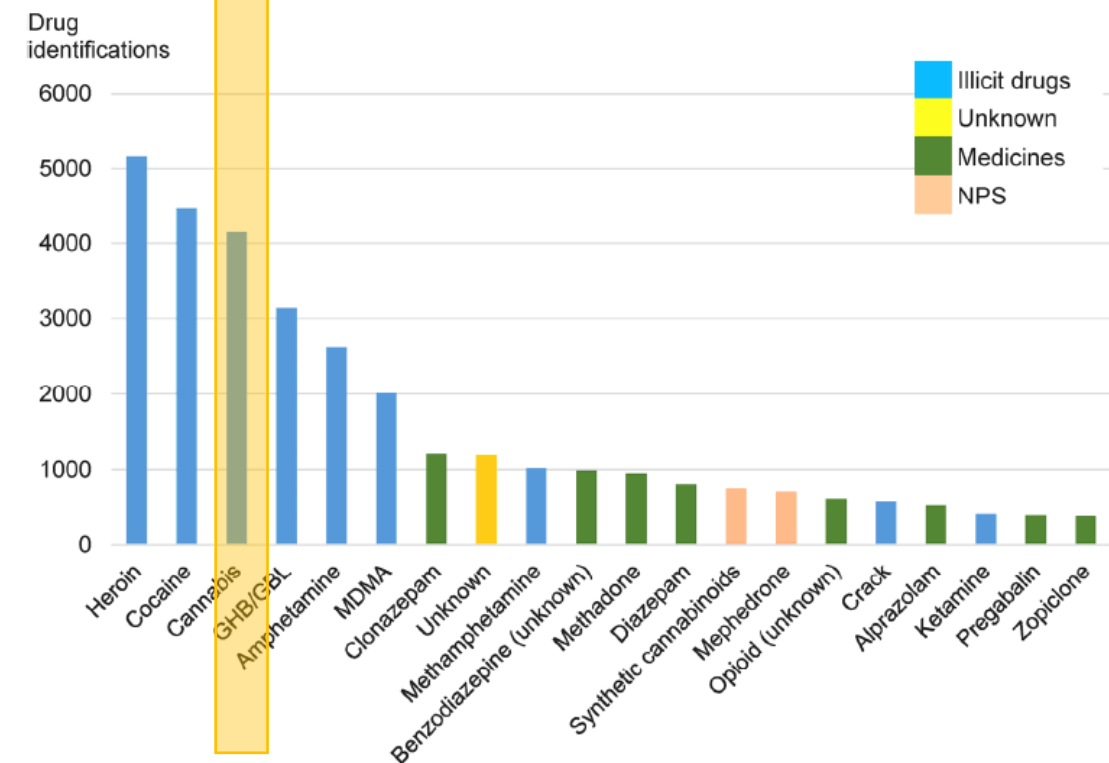
**Abbreviations:** APC, annual percent change; eCHIRPP, electronic Canadian Hospitals Injury Reporting and Prevention Program.

<sup>a</sup> Records for 2019 were suppressed due to varying entry times in eCHIRPP.

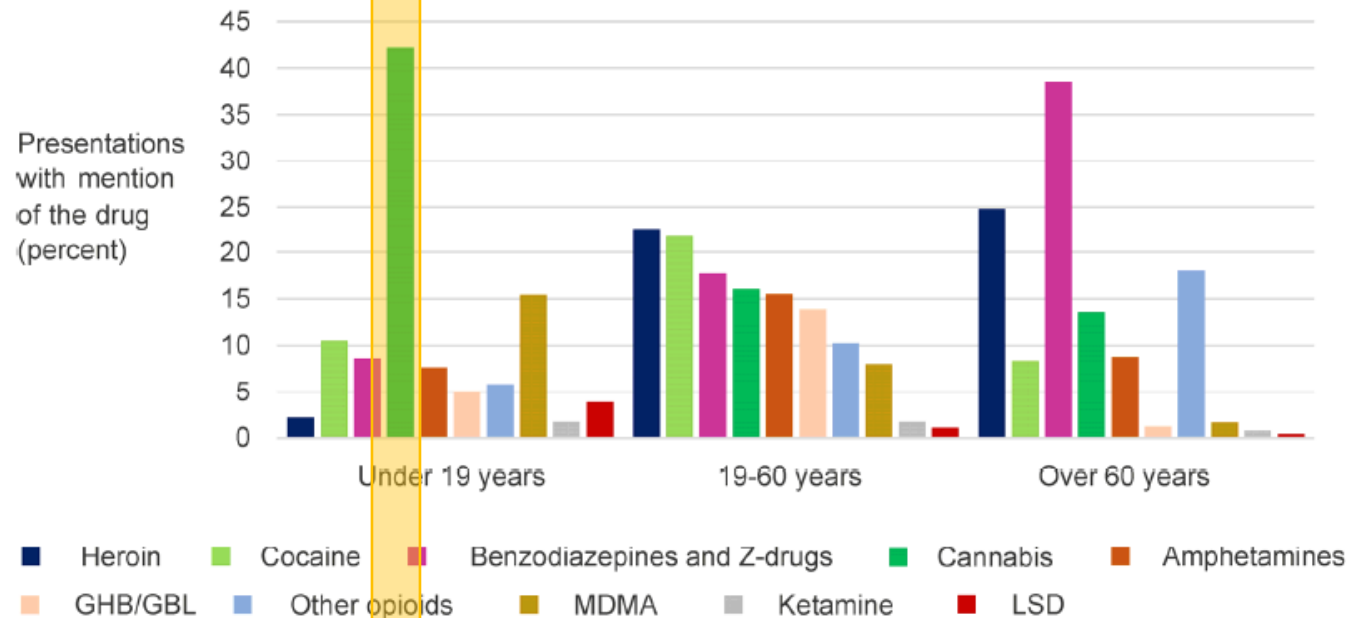
# CUD: INTOSSICAZIONE ACUTA



**Top 20 drugs involved (number of reports) in Euro-DEN Plus presentations, 2014-2017**



**Proportions of people within each age group reporting each drug in Euro-DEN Plus presentations, for selected substances, 2014-17**



# CUD: INTOSSICAZIONE ACUTA

Most common clinical features in the cases with cannabis alone (N = 186).

| Clinical feature                                      | Occurrence as the only clinical feature | Occurrence with other clinical features | Total occurrence |
|---|---|---|------------------|
| <i>Cardiovascular symptoms</i>                        |   |   |                  |
| Tachycardia (HR $\geq$ 100 bpm) on arrival            | 6                                       | 60                                      | 66               |
| Palpitations  | 3                                       | 44                                      | 47               |
| Chest pain  | 2                                       | 25                                      | 27               |
| Nausea / vomiting                                     | 5                                       | 43                                      | 48               |
| Anxiety   | 1                                       | 41                                      | 42               |
| Dizziness   | 0                                       | 27                                      | 27               |
| Impaired consciousness (GCS 8-14/"drowsy") on arrival | 5                                       | 16                                      | 21               |
| Agitation / aggression                                | 1                                       | 18                                      | 19               |
| <i>Respiratory symptoms</i>                           |   |   |                  |
| Dyspnoea  | 2                                       | 17                                      | 19               |
| Hyperventilation                                      | 0                                       | 17                                      | 17               |
| Panic attack  | 0                                       | 14                                      | 14               |
| Psychosis   | 1                                       | 11                                      | 12               |
| Mydriasis   | 0                                       | 11                                      | 11               |
| Seizures  | 2                                       | 7                                       | 9                |
| Hallucinations  | 0                                       | 7                                       | 7                |

Number of patients presenting with the clinical features in descending order of frequency. HR: heart rate; bpm: beats per minute; GCS: Glasgow Coma Score.

Substances reported or analytically detected in combination with cannabis (n).

| Substances                             | Reported | Analytically detected |
|--|----------|-----------------------|
| alcohol                                | 238      | 219                   |
| cocaine                                | 121      | 77                    |
| amphetamine/methamphetamine            | 45       | 39                    |
| benzodiazepines/sedatives              | 40       | 72                    |
| MDMA/ecstasy                           | 30       |                       |
| heroin                                 | 23       |                       |
| LSD                                    | 21       | 2                     |
| opioids other than heroin or methadone | 12       |                       |
| methadone                              | 9        | 22                    |
| opiates                                |          | 31                    |
| methylphenidate                        | 7        | 1                     |
| psychedelic mushrooms                  | 5        |                       |
| neuroleptics                           | 4        | 3                     |
| ketamine                               | 3        | 1                     |
| poppers                                | 2        |                       |
| antidepressants                        | 2        | 6                     |
| antihistamines                         | 1        |                       |
| laughing gas                           | 1        |                       |
| dextromethorphan                       | 1        |                       |
| testosterone                           | 1        |                       |
| sildenafil                             | 1        |                       |
| bupropion                              | 1        |                       |
| tizanidine                             | 1        |                       |
| clomethiazole                          | 1        |                       |
| caffeine                               | 1        |                       |
| melatonin (self-reported as "melanin") | 1        |                       |
| self-reported "smileys"                | 1        |                       |
| self-reported "synthetic drugs"        | 1        |                       |
| unknown substance                      | 10       |                       |



# CANNABINOID HYPEREMESIS SYNDROME (CSH)



Frequent **vomiting** from use of cannabis (pot/marijuana)

## CHS - Cannabinoid Hyperemesis Syndrome



If you are vomiting more than 5 times per day, for a day or longer, immediately contact your health care provider or go to the nearest emergency department.



If you continue to experience CHS symptoms and are not improving as expected, talk with your health care provider.

### What is CHS?

People with cannabinoid hyperemesis syndrome (CHS) experience persistent nausea and stomach pain that can lead to frequent and repetitive vomiting and weight loss. Frequent use of cannabis (at least once a week for more than a year) can increase the risk.

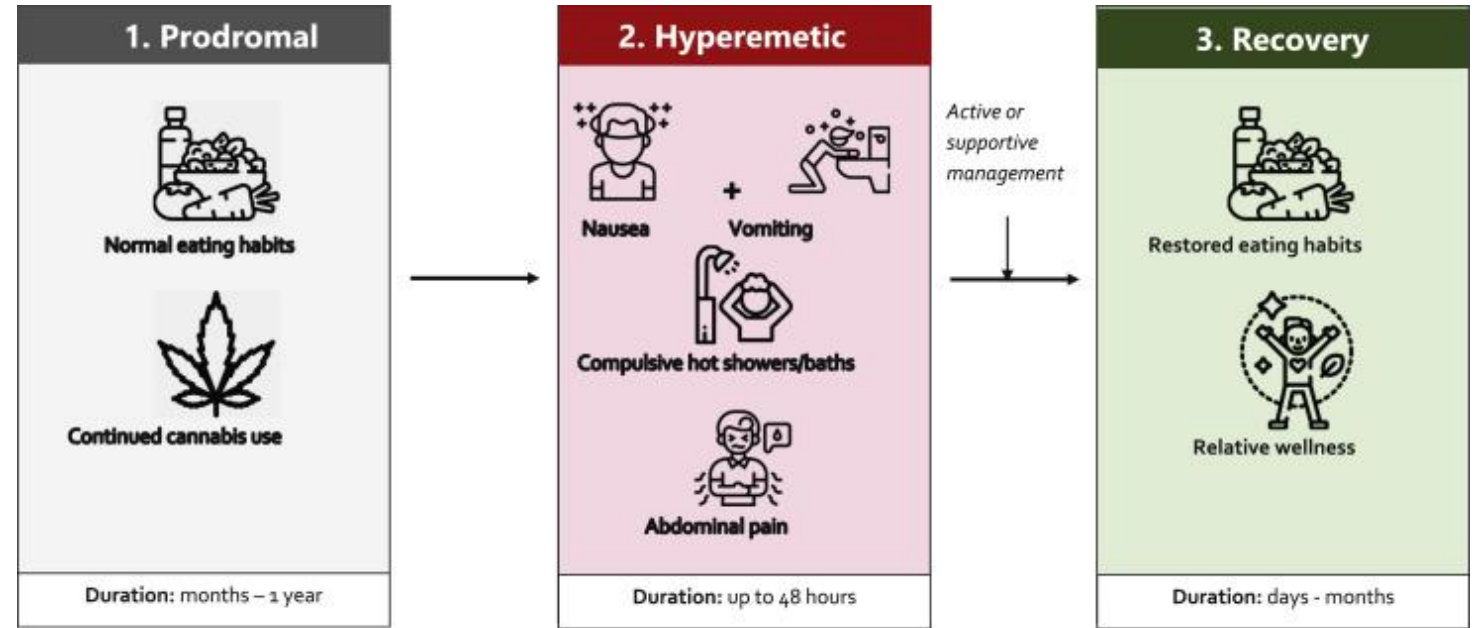
### Treatment

- People with CHS may take a hot shower or bath to help temporarily relieve their symptoms. Caution should be taken as these can cause dehydration or scald/burn the skin.
- Capsaicin cream (brand name Zostrix) may be prescribed to help reduce the symptoms of CHS. The cream is to be applied to your stomach, back, or arms.
- Other medications may be prescribed to relieve nausea and vomiting.
- If you go to the emergency department, let your health care provider know if you are using cannabis to manage a medical condition. Your health care provider may do some blood tests. You may be given fluids intravenously to keep you hydrated and help you feel better.

### Prevention

Choosing not to use cannabis is the only way to completely avoid CHS. If CHS does occur, the symptoms will usually resolve within 2 weeks after you stop using cannabis. **However, if you've had CHS once, even a small amount of cannabis can cause the symptoms to come back.** If this happens, talk to your health care provider about treatment options or programs for stopping cannabis use.

Reduce your risk of CHS by following "[Cannabis & Your Health: 10 WAYS to Reduce Risks When Using](https://bit.ly/lcugphac)". <https://bit.ly/lcugphac>



For more information visit: [www.ccsa.ca/cannabis](http://www.ccsa.ca/cannabis)

To access a PDF of this handout visit: [safemedicationuse.ca/tools\\_resources/tips.html](https://safemedicationuse.ca/tools_resources/tips.html)

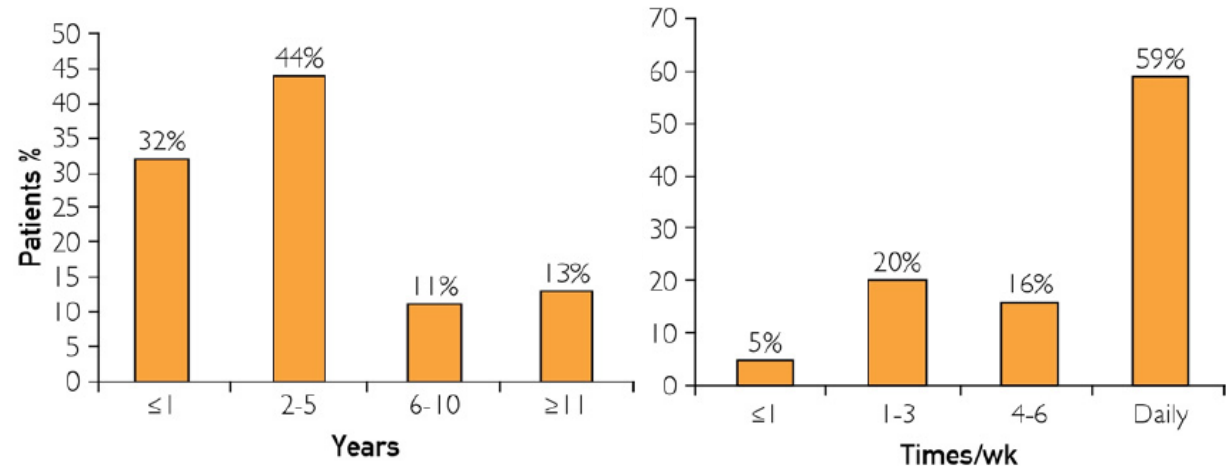
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SafeMedicationUse.ca

Asymptomatic period

# CANNABINOID HYPEREMESIS SYNDROME (CSH)



**Table 1**  
Rome IV criteria for CHS diagnosis

| Category           | Features  |
|--------------------|---|
| Essential          | Stereotypical episodic vomiting resembling CVS in terms of onset, duration, and frequency<br>Presentation after prolonged, excessive cannabis use<br>Relief of vomiting episodes by sustained cessation of cannabis use |
| Supportive remarks | May be associated with pathologic bathing behavior (prolonged hot baths or showers)   |

CHS = cannabinoid hyperemesis syndrome; CVS = cyclic vomiting syndrome.

| Mechanism   | GRADE rating |
|---|--------------|
| The emetogenic and anti-emetic effects of $\Delta$ 9-THC and its analogs are mediated through CB-1 receptors (CB1r) and thus underlie the syndrome of CHS [106, 135]  | Very low     |
| Cannabinoids may bind to CB-1 receptors in the gastrointestinal tract and decrease GI motility and gastric emptying, which may override brainstem-mediated antiemetic effects and precipitate hyperemesis [9, 92, 95, 132]  | Very low     |
| Chronic cannabis use may lead to paradoxical and plastic changes in expression and downstream effects of cannabinoid receptors [133]  | Very low     |
| Chronic cannabis use leads to desensitization and downregulation of CB1 receptors that ordinarily have peripheral antiemetic effects, causing rebound vomiting and spasmodic pain that abates with abstinence and corresponding recovery of CB-1 receptor activity [98, 136, 185] | Very low     |
| In chronic cannabis users, cannabinoid metabolites may accumulate in the brain and fatty tissues inducing a toxic effect [90, 94]   | Very low     |
| CHS may be caused by a non-THC, cannabinoid-like structure within <i>Cannabis sativa</i> , such as cannabidiol [96, 186]  | Very low     |
| Patients susceptible to developing CHS may have genetic variation in their metabolic enzymes resulting in toxic levels of cannabinoid metabolites [131]   | Very low     |
| $\Delta$ 9-THC may act as a partial agonist on CB1 receptors and thus relatively antagonize the effects of full endogenous agonists on these receptors, thus precipitating sudden withdrawal and hyperemesis in sensitive patients [97, 105]                                      | Very low     |
| THC causes dilation of splanchnic vasculature, resulting in CHS. Hot bathing leads to peripheral venodilation and shunts blood away from the splanchnic bed, resulting in symptom improvement [102, 137]  | Very low     |

Simonetto DA et al. Cannabinoid hyperemesis: a case series of 98 patients. *Mayo Clin Proc.* 2012 Feb;87(2):114-9  
 Zhu JW et al. Diagnosis and Acute Management of Adolescent Cannabinoid Hyperemesis Syndrome: A Systematic Review. *J Adolesc Health.* 2021 Feb;68(2):246-254  
 Sorensen CJ et al. Cannabinoid Hyperemesis Syndrome: Diagnosis, Pathophysiology, and Treatment-a Systematic Review. *J Med Toxicol.* 2017 Mar;13(1):71-87

# CUD: IMPATTO A BREVE E LUNGO TERMINE



**Table 1 Common clinical adverse effects associated with cannabinoids use**

|                                 |   |
|---------------------------------|---|
| Psychiatric conditions          | An increased risk of psychotic disorders following acute and repeated consumption of cannabis in vulnerable individuals and naïve users. <sup>27,28,41-44</sup><br>Anxiety and panic attacks following intoxication especially in naive users. <sup>38</sup><br>Chronic use is associated with mood disturbances, mania, and depression. <sup>36,37,39,40</sup><br>Cannabis addiction and dependency. <sup>9,13</sup> |
| Cognitive and CNS alterations   | Impairment of a wide range of cognitive functions following cannabis intoxication in a dose-relation manner. <sup>38-42,44,45</sup><br>Impaired cognitive function following cannabis consumption was associated with an increased risk of having a road accident. <sup>31-35</sup><br>Chronic use is associated with long-term brain functional and structural alterations. <sup>31,32,45-50</sup>                   |
| Effects on respiratory system   | Acute cannabis consumption decreases airway resistance. <sup>12</sup><br>Chronic cannabis use is associated with an increased risk for developing airway diseases and lung cancer. <sup>59-66</sup>   |
| Effect on cardiovascular system | An increase of cardiovascular activity, increase of heart rate, and decrease of blood pressure. <sup>64</sup> Several reports have described a temporal relationship between cannabis use and acute myocardial infarction, cardiomyopathy, and sudden cardiac death. <sup>68-72</sup>   |



# CUD E PATOLOGIE PSICHIATRICHE



Figure 2. Forest Plot Showing Adjusted Odds Ratio (OR) and 95% CIs for Depression and Anxiety in Young Adulthood According to Cannabis Use in Individual Studies

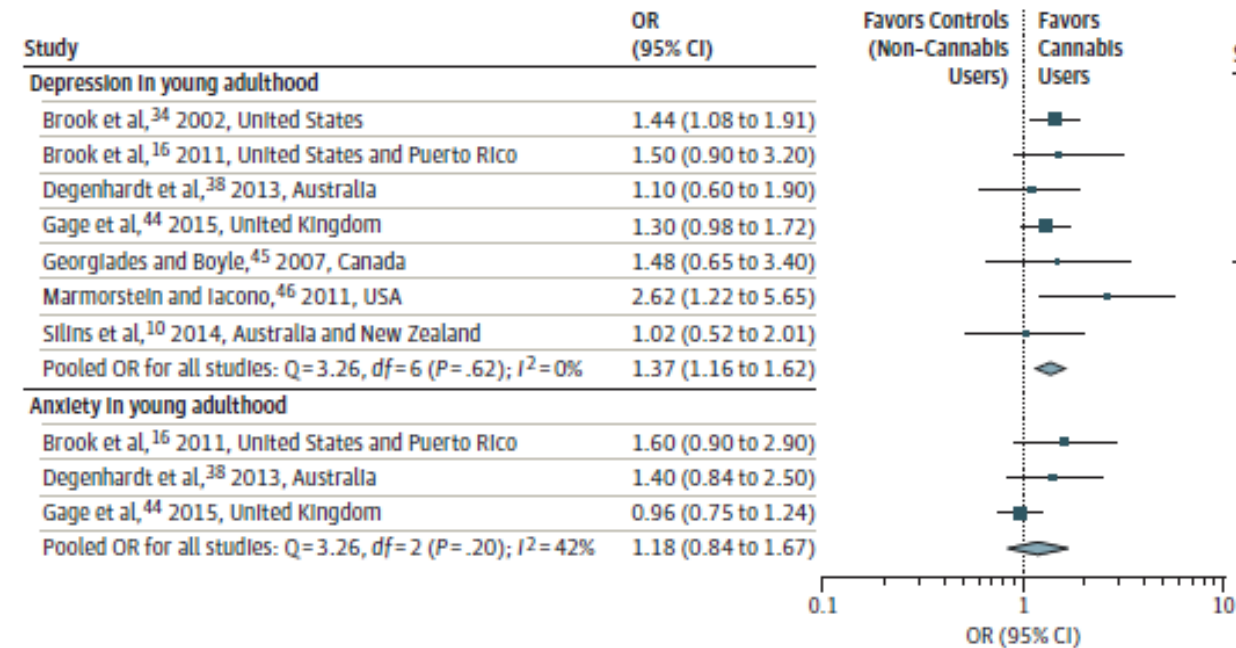
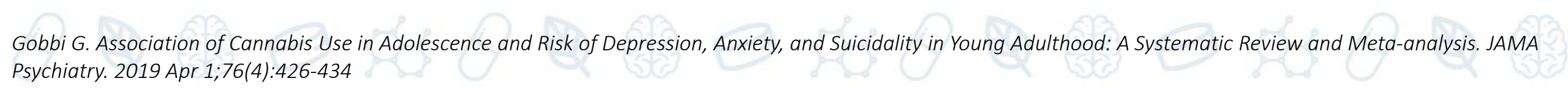
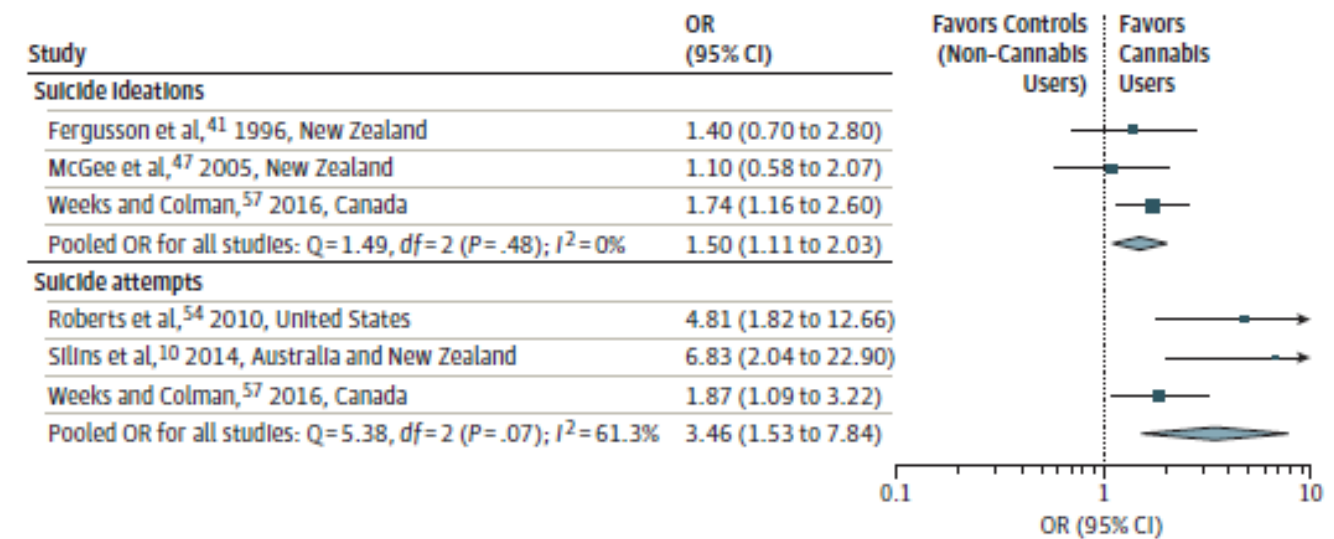


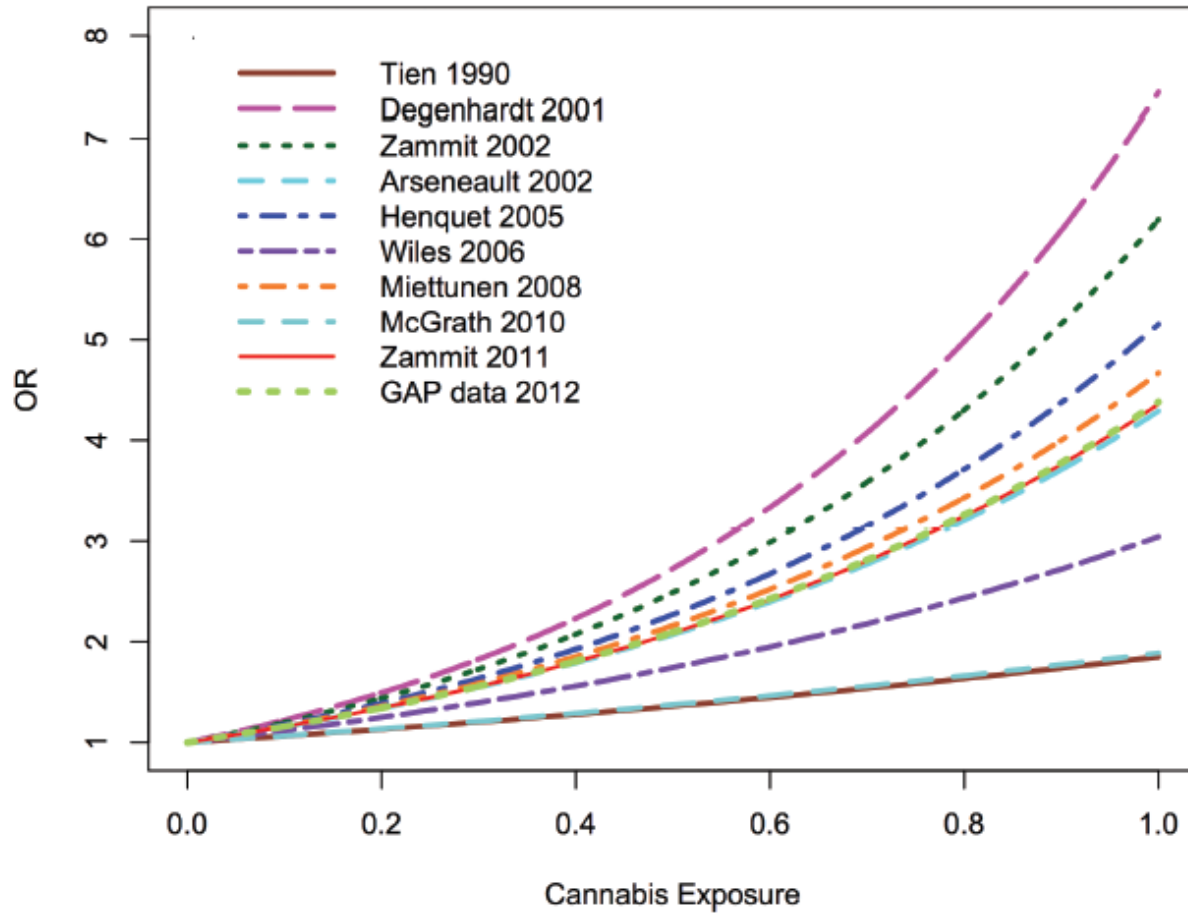
Figure 3. Forest Plot Showing Adjusted Odds Ratio (OR) and 95% CIs for Suicidal Ideations and Attempts According to Cannabis Use in Individual Studies



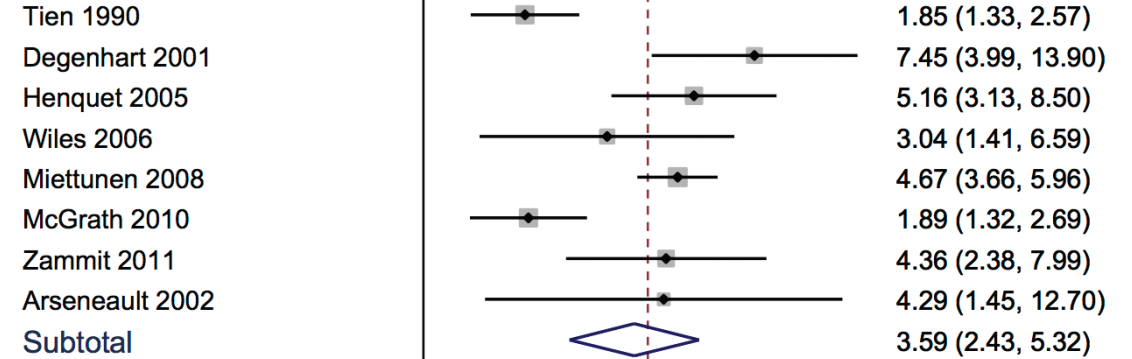


# CUD E PATOLOGIE PSICHIATRICHE

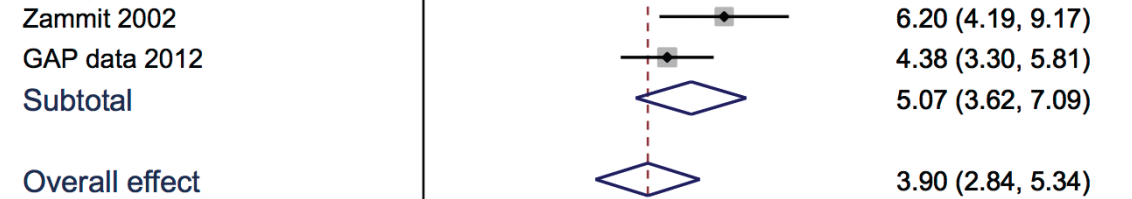
## Psychosis risk distribution



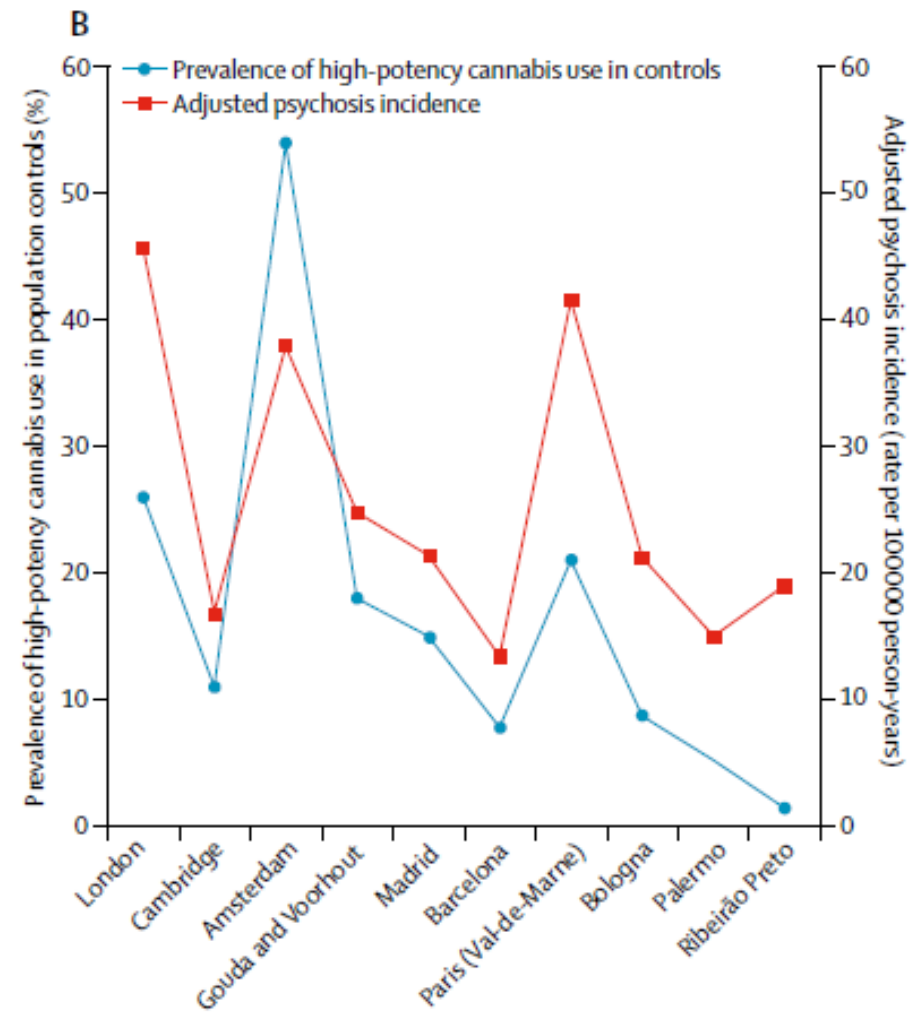
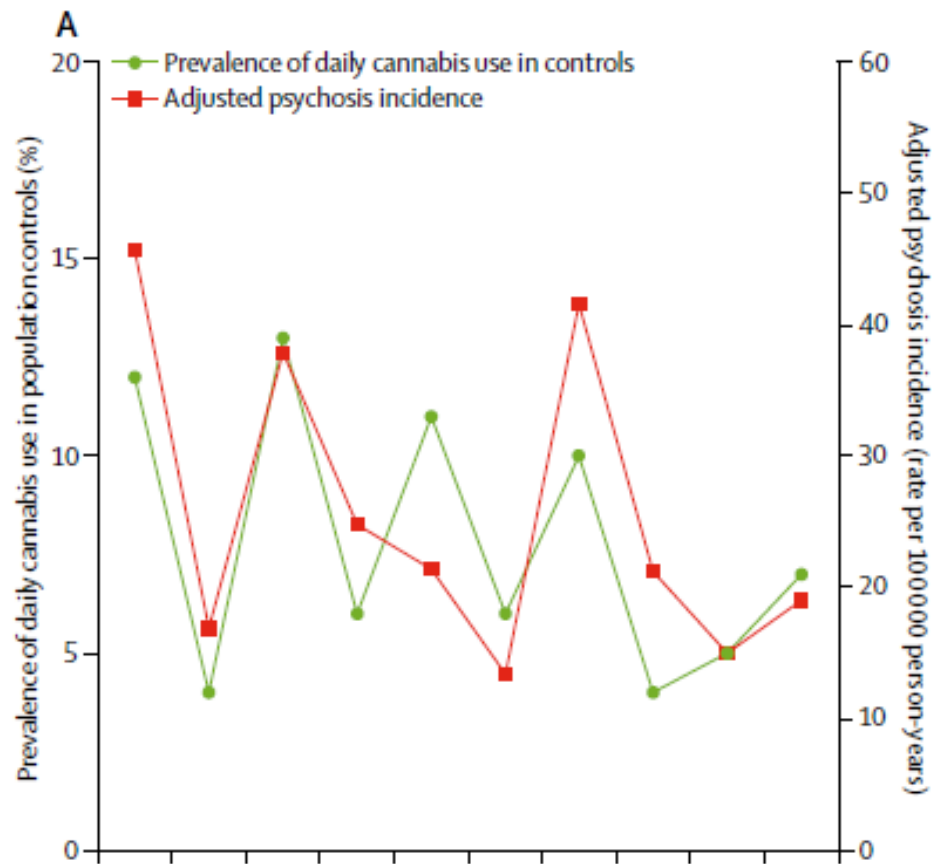
## Psychotic symptoms



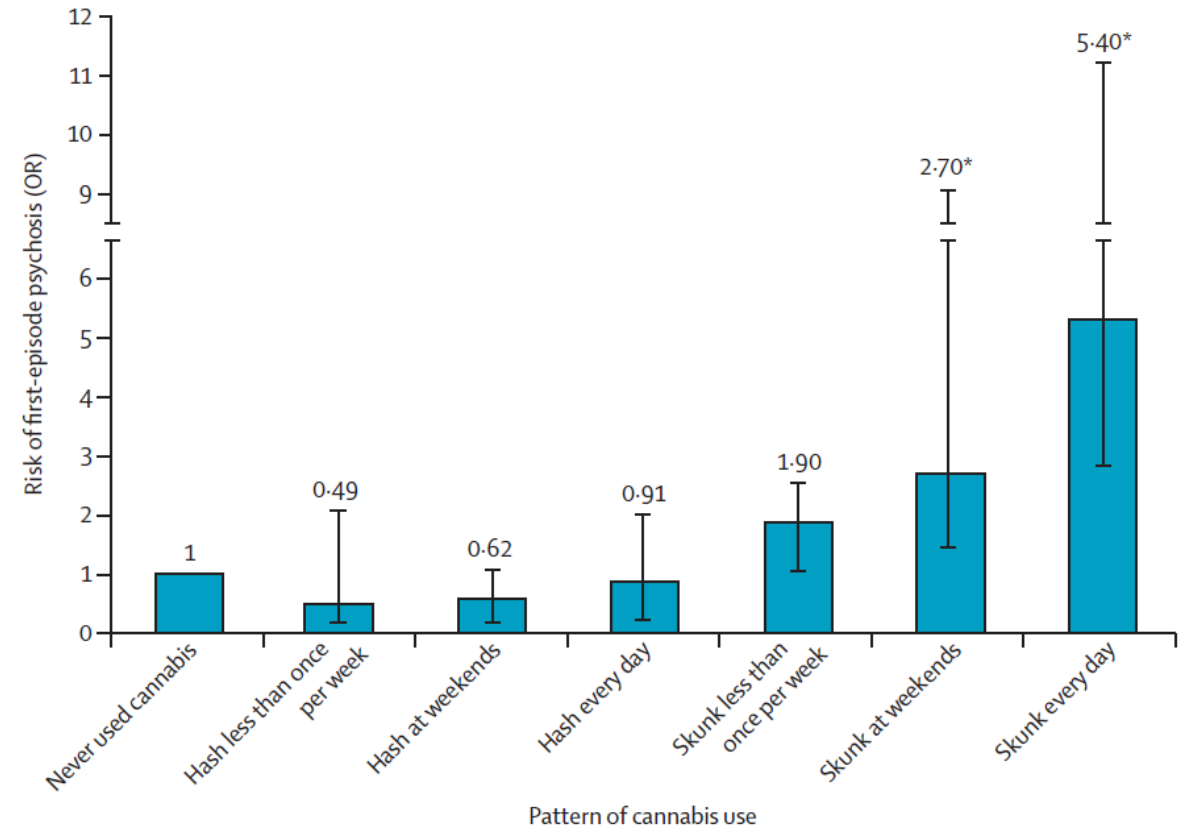
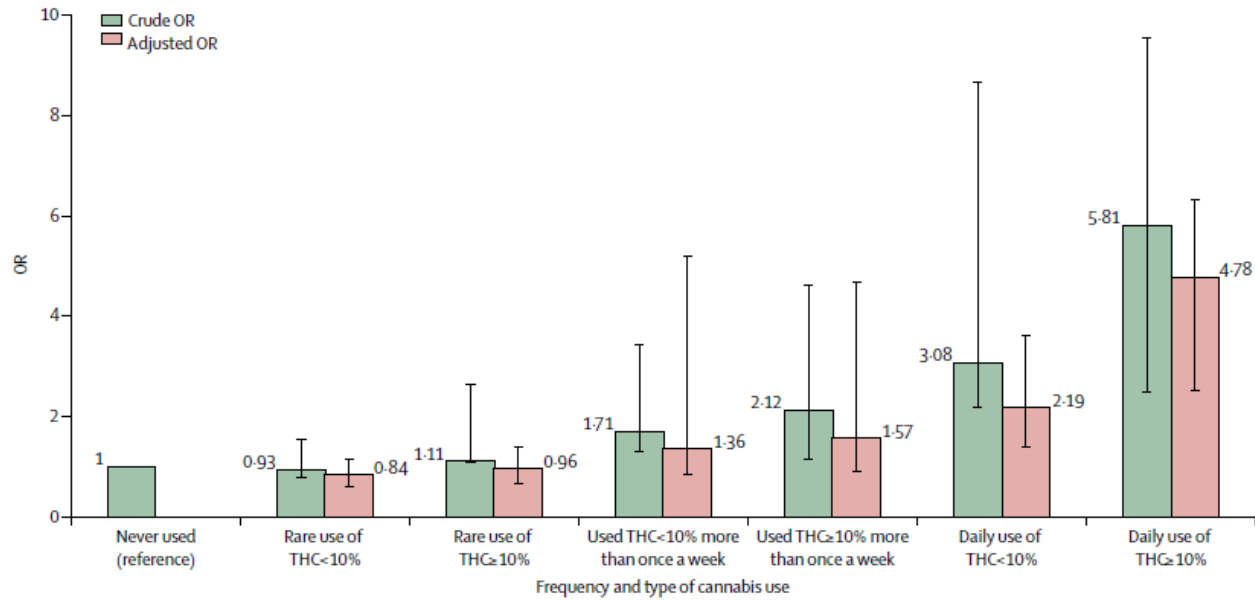
## Diagnosis of psychosis



# PATTERN DI CONSUMO E PATOLOGIE PSICHIATRICHE



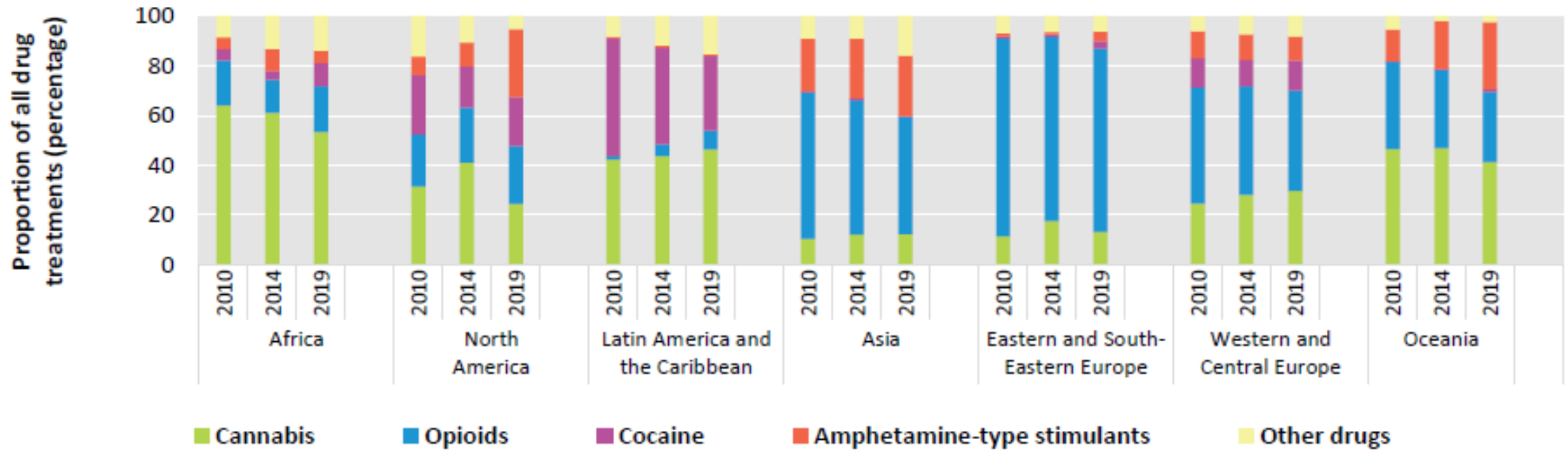
# PATTERN DI CONSUMO E PATOLOGIE PSICHIATRICHE



Di Forti M et al; EU-GEI WP2 Group. The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study. *Lancet Psychiatry*. 2019 May;6(5):427-436; Di Forti M et al. Proportion of patients in south London with first-episode psychosis attributable to use of high potency cannabis: a case-control study. *Lancet Psychiatry*. 2015 Mar;2(3):233-8

# DISTURBO DA USO DI CANNABIS: RICHIESTA DI TRATTAMENTO

**FIG. 20** Trends in the primary drug of concern in people in treatment for drug use disorders, by region, 2010, 2014 and 2019



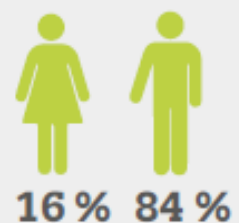


# DISTURBO DA USO DI CANNABIS: RICHIESTA DI TRATTAMENTO



## Consumatori di cannabis che si sottopongono a trattamento

### Caratteristiche



Età media al primo consumo **17**

Età media all'inizio del primo trattamento **25**

**28 000**  
Utenti già in carico

25 %

**21 000**  
Status sconosciuto  
19 %

**62 000**  
Utenti presi in carico per la prima volta  
56 %

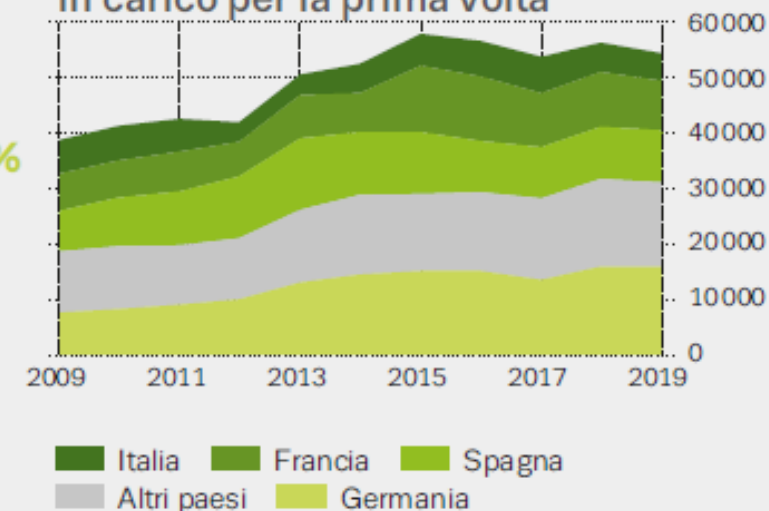


### Frequenza di consumo nell'ultimo mese

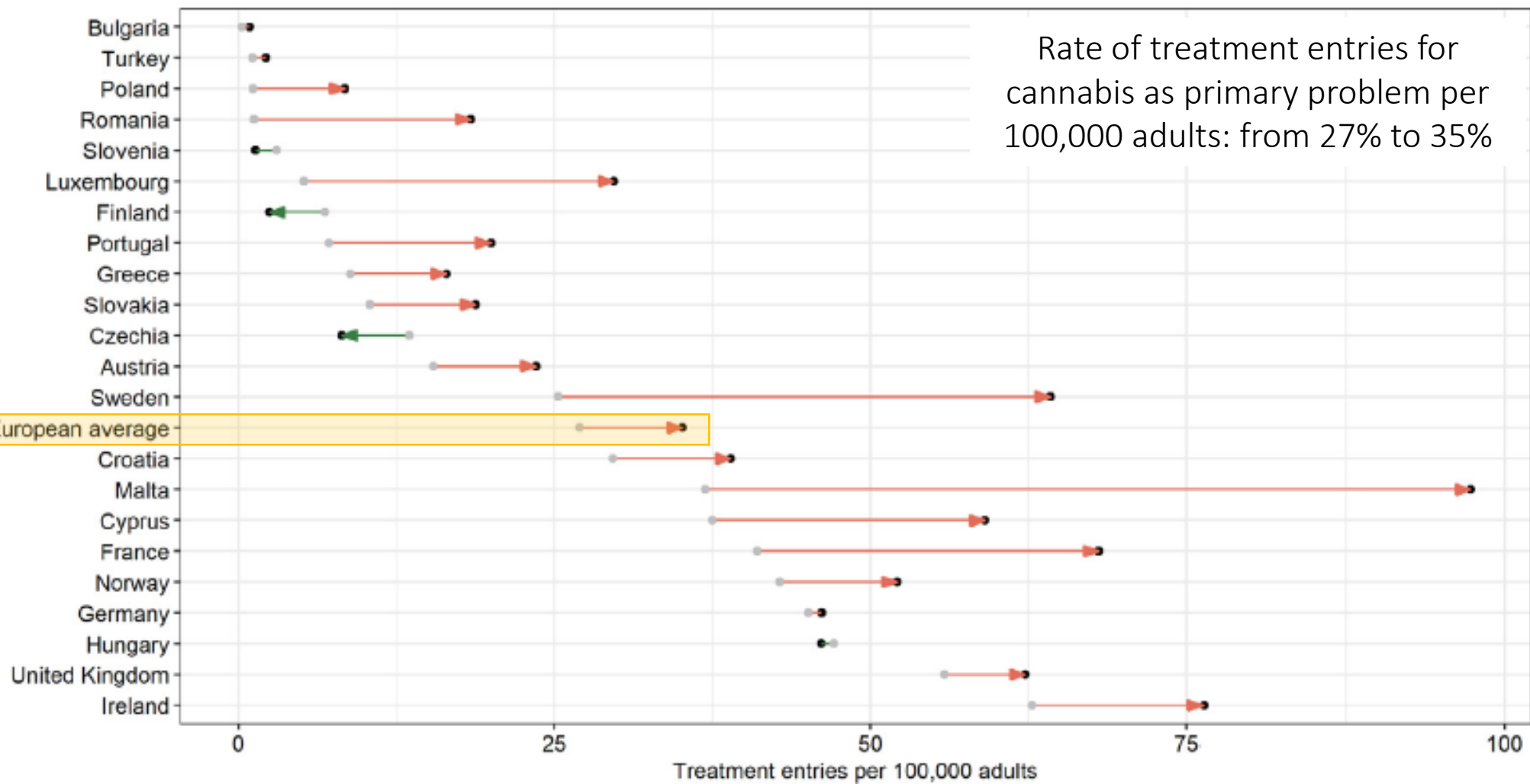
Consumo medio di 5,2 giorni alla settimana



### Tendenze relative agli utenti presi in carico per la prima volta



# DISTURBO DA USO DI CANNABIS: RICHIESTA DI TRATTAMENTO



# DISTURBO DA USO DI CANNABIS: RICHIESTA DI TRATTAMENTO

Figura 6.1.5 - Distribuzione degli utenti trattati nei SerD per sostanza primaria

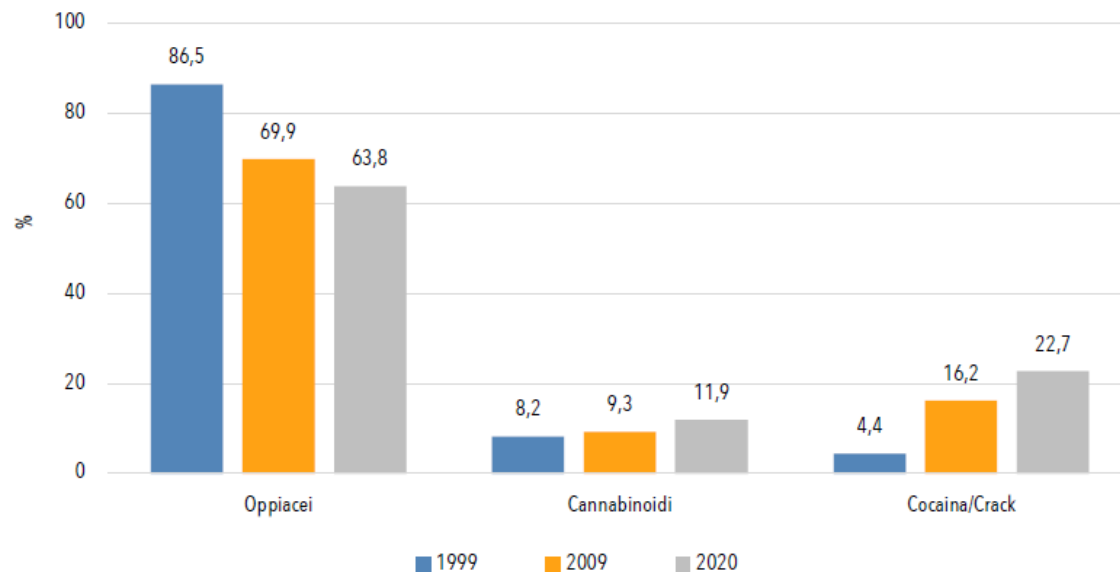
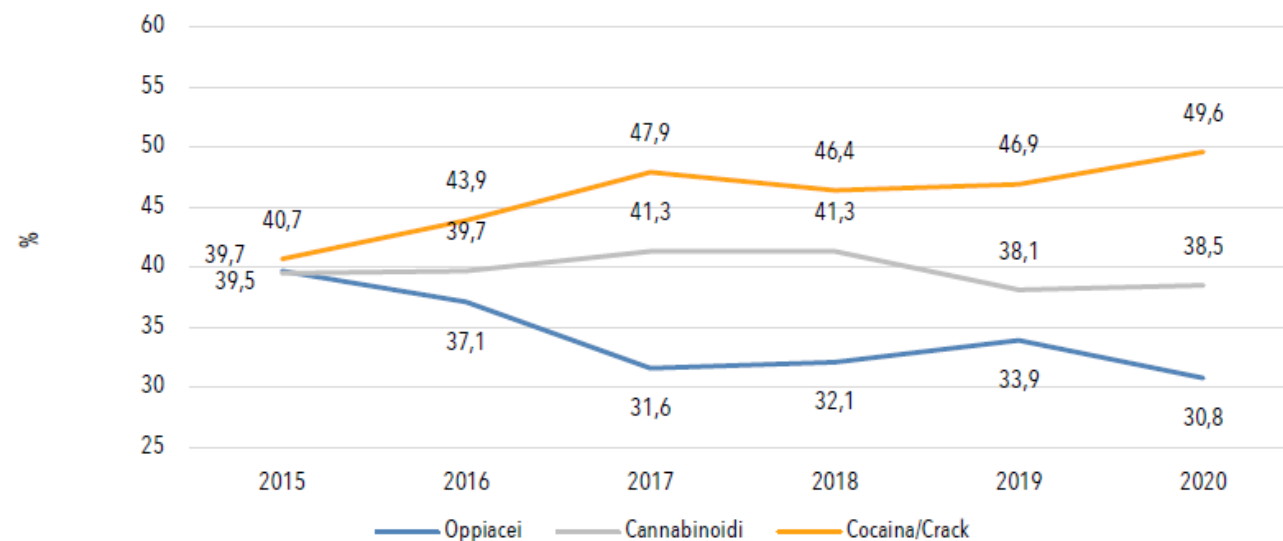


Figura 6.1.7 - Andamento temporale dei nuovi utenti trattati nei SerD per sostanza (primaria o secondaria)



Cannabinoidi



SOSTANZA PRIMARIA

14.968

11,9

SOSTANZA SECONDARIA

19.565

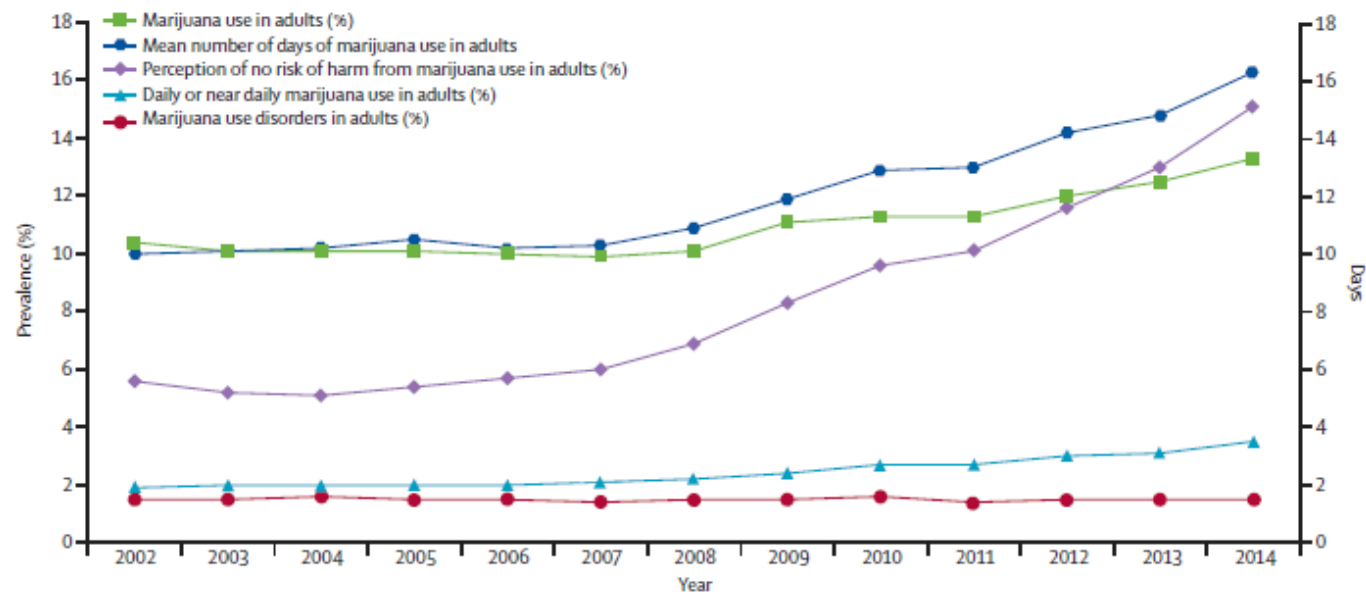
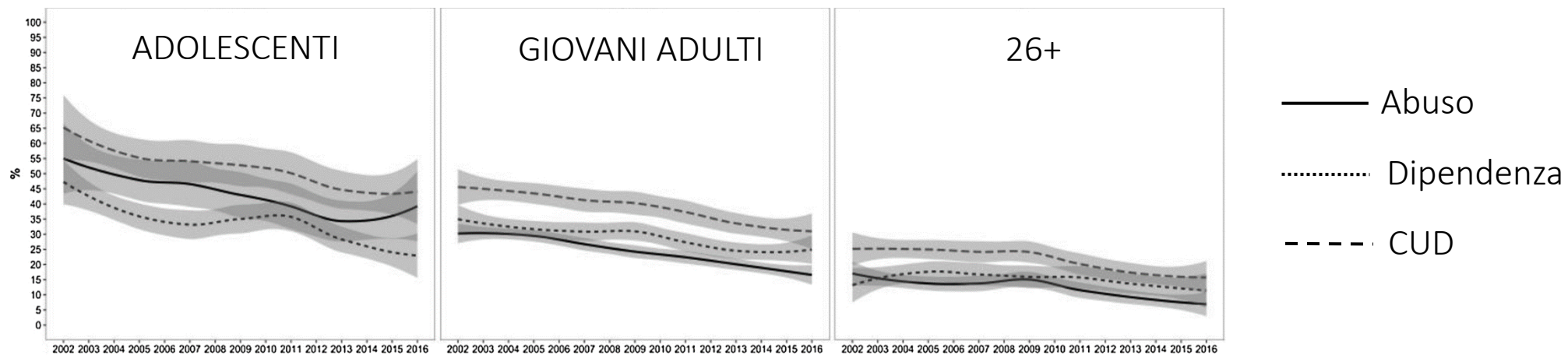
15,6

TOTALE

34.533

27,5

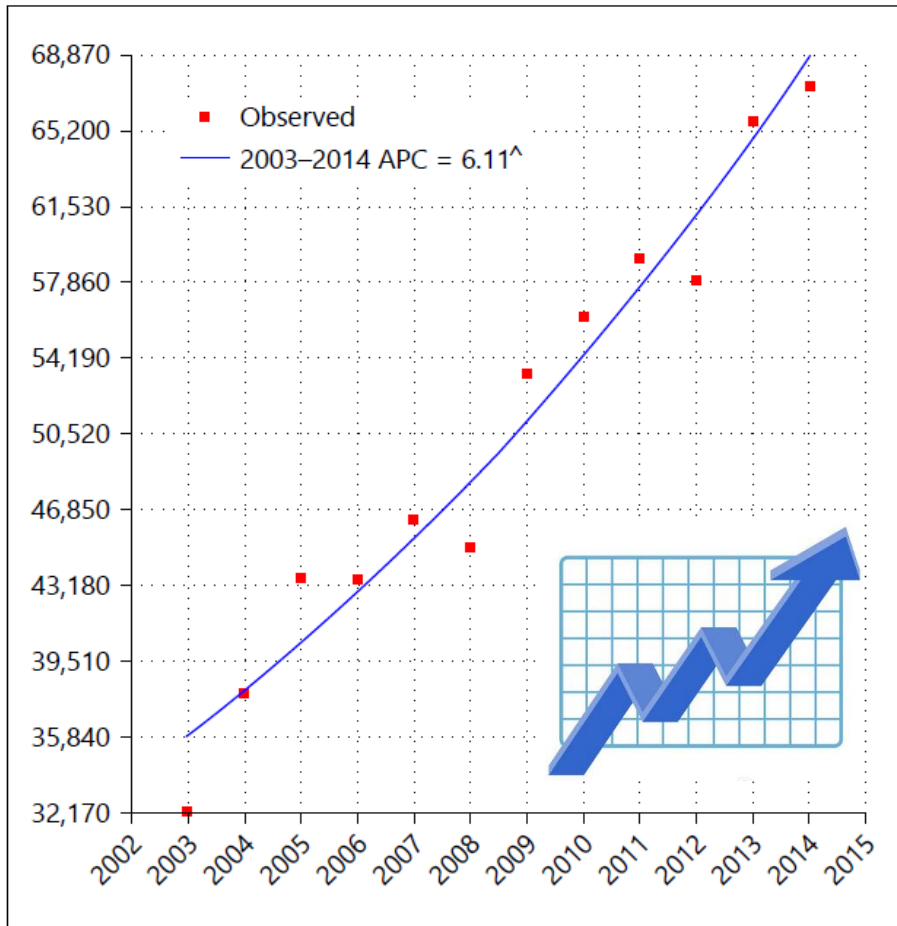
# CUD: DIMENSIONI DEL FENOMENO



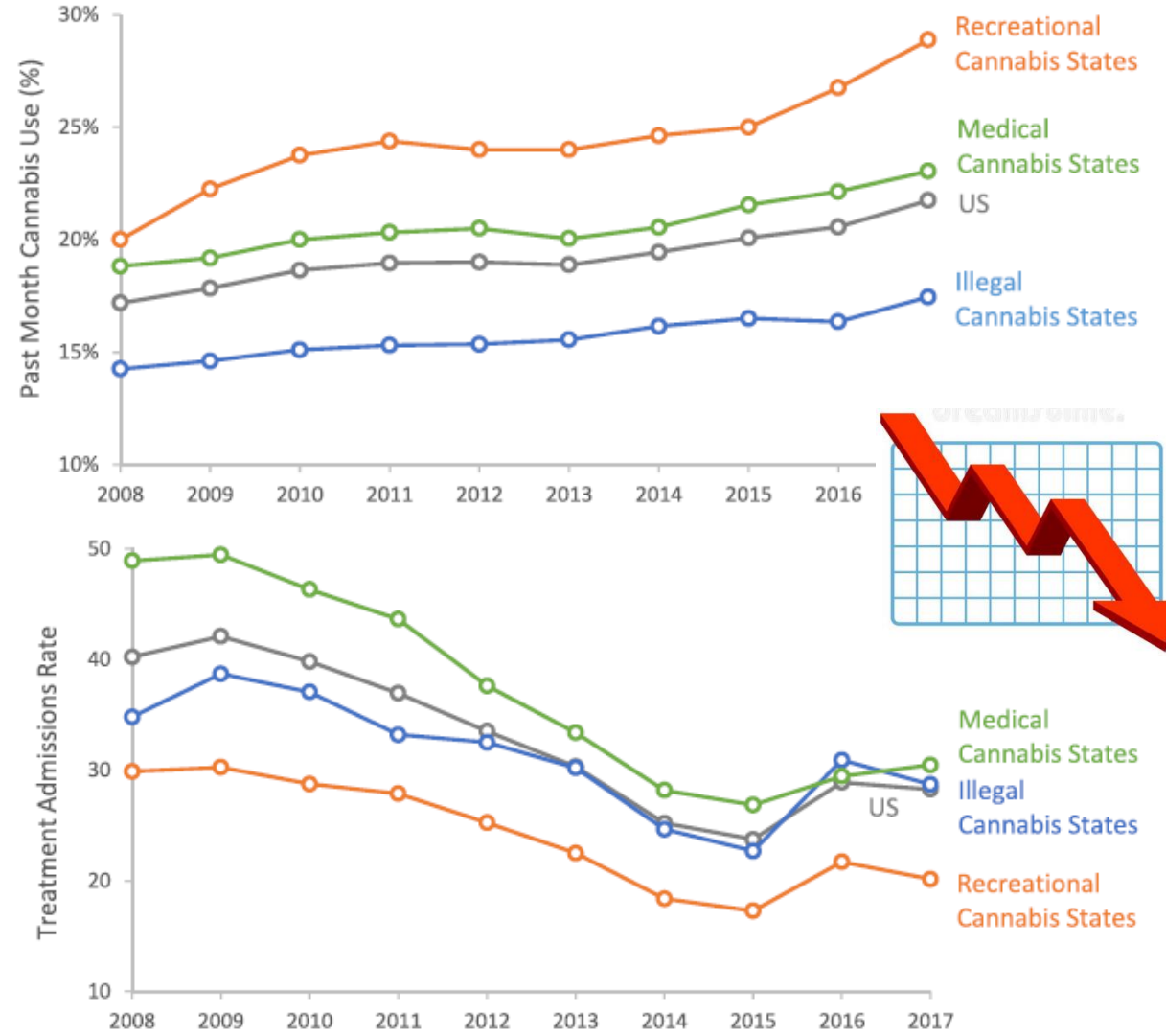
Santaella-Tenorio J et al. Cannabis use disorder among people using cannabis daily/almost daily in the United States, 2002-2016. *Drug Alcohol Depend.* 2019 Dec 1;205:107621; Compton WM et al. Marijuana use and use disorders in adults in the USA, 2002-14: analysis of annual cross-sectional surveys. *Lancet Psychiatry.* 2016 Oct;3(10):954-964



# CUD: DIMENSIONI DEL FENOMENO



**Fig. 1.** Trends in the number of first-time cannabis treatment admission in Eu-22 – jointpoint regression outcome, 2003–2014. APC, annual percent change – observed.



Montanari L et al. Cannabis Use among People Entering Drug Treatment in Europe: A Growing Phenomenon? *Eur Addict Res.* 2017;23(3):113-121  
 Mennis J et al. Young adult cannabis use disorder treatment admissions declined as past month cannabis use increased in the U.S.: An analysis of states by year, 2008-2017. *Addict Behav.* 2021 Dec;123

# CUD: BARRIERE AL TRATTAMENTO

| Factor   | Sought Treatment in Lifetime (n = 126)<br>% (SE) | Never sought Treatment in Lifetime (n = 225)<br>% (SE) | Total (n = 351)<br>% (SE) |
|--|--|--|---------------------------|
| <b>PREDISPOSING</b>                                      |  |  |                           |
| <b>Fear of Stigma/Social Consequences</b>                |  |  |                           |
| Too embarrassed to discuss it                            | 32.15 (5.91)                                     | 24.32 (2.79) <sup>1</sup>                              | 27.23 (2.80) <sup>1</sup> |
| Afraid of what others would think                        | 27.96 (5.82)                                     | 17.63 (3.21)   | 21.47 (2.99)              |
| Hated answering personal questions                       | 12.91 (3.56)                                     | 13.38 (2.62)   | 13.20 (2.06)              |
| Afraid would lose job                                    | 13.15 (3.82)                                     | 8.66 (2.30)  | 10.33 (2.22)              |
| Was afraid children would be taken away                  | 4.36 (1.63)                                      | 6.14 (1.34)  | 5.48 (1.01)               |
| Family member objected                                   | 0.95 (0.94)                                      | 0.98 (0.53)  | 0.97 (0.49)               |
| <b>Fear of Treatment</b>                                 |  |  |                           |
| Afraid would be put into the hospital                    | 17.92 (4.60)                                     | 15.14 (3.01)   | 16.17 (2.51)              |
| Afraid of the treatment                                  | 15.62 (4.25)                                     | 10.93 (3.28)   | 12.67 (2.46)              |
| <b>Treatment Pessimism</b>                               |  |  |                           |
| Did not think anyone could help                          | 27.85 (5.06)                                     | 11.62 (2.41)   | 17.66 (2.73)              |
| Tried to get help before and it didn't work              | 17.83 (3.84)                                     | 7.48 (2.17)  | 11.33 (2.08)              |
| <b>ENABLING</b>  |  |  |                           |
| <b>Financial</b>   |  |  |                           |
| Could not afford to pay                                  | 19.07 (4.63)                                     | 18.19 (2.87)   | 18.52 (2.76)              |
| Health insurance didn't pay for it                       | 20.01 (4.48)                                     | 13.99 (3.47)   | 16.23 (2.75)              |
| Could not arrange child care                             | 0.66 (0.49)                                      | 1.61 (1.12)  | 1.26 (0.73)               |
| <b>Logistical/Structural</b>                             |  |  |                           |
| Did not know any place to go for help                    | 10.89 (3.23)                                     | 13.86 (2.70)   | 12.75 (2.10)              |
| Did not have time  | 15.50 (4.29)                                     | 6.81 (2.06)  | 10.04 (2.21)              |
| Did not have a way to get there                          | 10.46 (3.77)                                     | 4.91 (1.33)  | 6.97 (1.65)               |
| Had to wait too long                                     | 8.10 (3.22)                                      | 2.45 (0.93)  | 4.55 (1.40)               |
| Inconvenient hours                                       | 4.70 (2.17)                                      | 1.91 (1.17)  | 2.95 (1.10)               |
| Could not arrange child care                             | 0.66 (0.49)                                      | 1.61 (1.12)  | 1.26 (0.73)               |
| Cannot speak English well                                | 2.51 (2.48)                                      | 0.29 (0.29)  | 1.11 (0.94)               |
| <b>PERCEIVED NEED</b>                                    |  |  |                           |
| <b>Self-Reliance/Minimizing Problems</b>                 |  |  |                           |
| Thought should be strong enough to handle it alone       | 47.96 (6.27)                                     | 44.38 (4.56)   | 45.71 (3.94)              |
| Thought the problem would get better by itself           | 41.34 (6.43)                                     | 39.36 (3.84)   | 40.10 (3.41)              |
| Wanted to keep using                                     | 37.85 (5.86)                                     | 31.14 (3.33)   | 33.64 (3.05)              |
| Didn't want to go  | 36.38 (4.93)                                     | 31.59 (3.52)   | 33.38 (3.19)              |
| Thought problem was not serious enough                   | 23.17 (5.11)                                     | 27.30 (3.44)   | 25.77 (2.97)              |
| Stopped using on my own                                  | 16.43 (4.24)                                     | 26.64 (3.58)   | 22.85 (2.59)              |
| Did not think it was necessary (despite family requests) | 23.78 (4.72)                                     | 10.34 (2.45)   | 15.34 (2.50)              |



# CUD: TRATTAMENTO FARMACOLOGICO

**TABLE 3** Summary of Placebo-Controlled Clinical Trials of Medications for CUD Treatment

| Medication(s)            | Mechanism of action  | Reasoning for CUD treatment                        | Utility in CUD treatment   | Publications  |
|--------------------------|--|--|--|---|
| Bupropion                | NE+DA reuptake inhibition  | Withdrawal<br>Cannabis use                         | Limited, if any  | Haney <i>et al</i> , 2001 (L)<br>Carpentar <i>et al</i> , 2009 (T)<br>Penetar <i>et al</i> , 2012 (T) |
| Nefazodone               | NE reuptake inhibition   | Withdrawal<br>Cannabis use                         | Limited, if any; no longer available in the United States  | Haney <i>et al</i> , 2003 (L)<br>Carpentar <i>et al</i> , 2009 (T)                                    |
| Atomoxetine <sup>a</sup> | NE+DA reuptake inhibition  | Cognitive symptoms (similarities with ADHD), +ADHD | Limited, if any  | McRae-Clark <i>et al</i> (2010) (T)   |
| Venlafaxine <sup>a</sup> | NE+5HT reuptake inhibition   | CUD+MDD  | Limited, potentially exacerbates cannabis use  | Levin <i>et al</i> , 2013 (T)   |
| Mirtazepine              | NE+5HT reuptake inhibition   | Withdrawal<br>Cannabis use                         | Specific withdrawal symptoms of insomnia and food intake   | Haney <i>et al</i> , 2010 (L)   |
| Bupirone                 | 5HT 1A partial agonist   | Cannabis use, anxiety                              | Limited, if any, particularly in women   | McRae-Clark <i>et al</i> , 2009 (T)<br>McRae-Clark <i>et al</i> , 2015 (T)                            |
| Escitalopram             | 5HT reuptake inhibition  | Cannabis use, withdrawal, anxiety, depression      | Limited, if any  | Weinstein <i>et al</i> , 2014 (T)   |
| Vilazodone               | 5HT 1A partial agonist+5HT reuptake inhibition   | Cannabis use                                       | Limited, if any  | McRae-Clark <i>et al</i> , 2016 (T)   |
| Divalproex               | Blocks voltage-dependent Na channels, increases GABA   | Withdrawal, irritability<br>Cannabis use           | Limited, if any  | Haney <i>et al</i> , 2004 (L)<br>Levin <i>et al</i> , 2004 (L)  |
| Lithium carbonate        | Not fully known, mood stabilizer with impact of depression, stimulates oxytocin release  | Withdrawal<br>Treatment completion                 | Limited, if any  | Johnston <i>et al</i> , 2014 (T/I)  |
| Quetiapine               | 5HT <sub>2A</sub> , DA <sub>2</sub> , H <sub>1</sub> , α <sub>1</sub> , α <sub>2</sub> antagonism; 5HT <sub>1A</sub> partial agonism; NE reuptake inhibition | Withdrawal<br>Cannabis use                         | Specific withdrawal symptoms, including sleep, food intake, and weight loss; concerns about increases in craving need to be considered | Cooper <i>et al</i> , 2013 (L)  |
| Badofen                  | GABA-B agonism   | Withdrawal<br>Cannabis use                         | Limited, if any  | Haney <i>et al</i> , 2010 (L)   |
| Zolpidem                 | GABA-A agonism   | Withdrawal, insomnia                               | Withdrawal-related sleep disturbances  | Vandrey <i>et al</i> , 2011 (L)   |

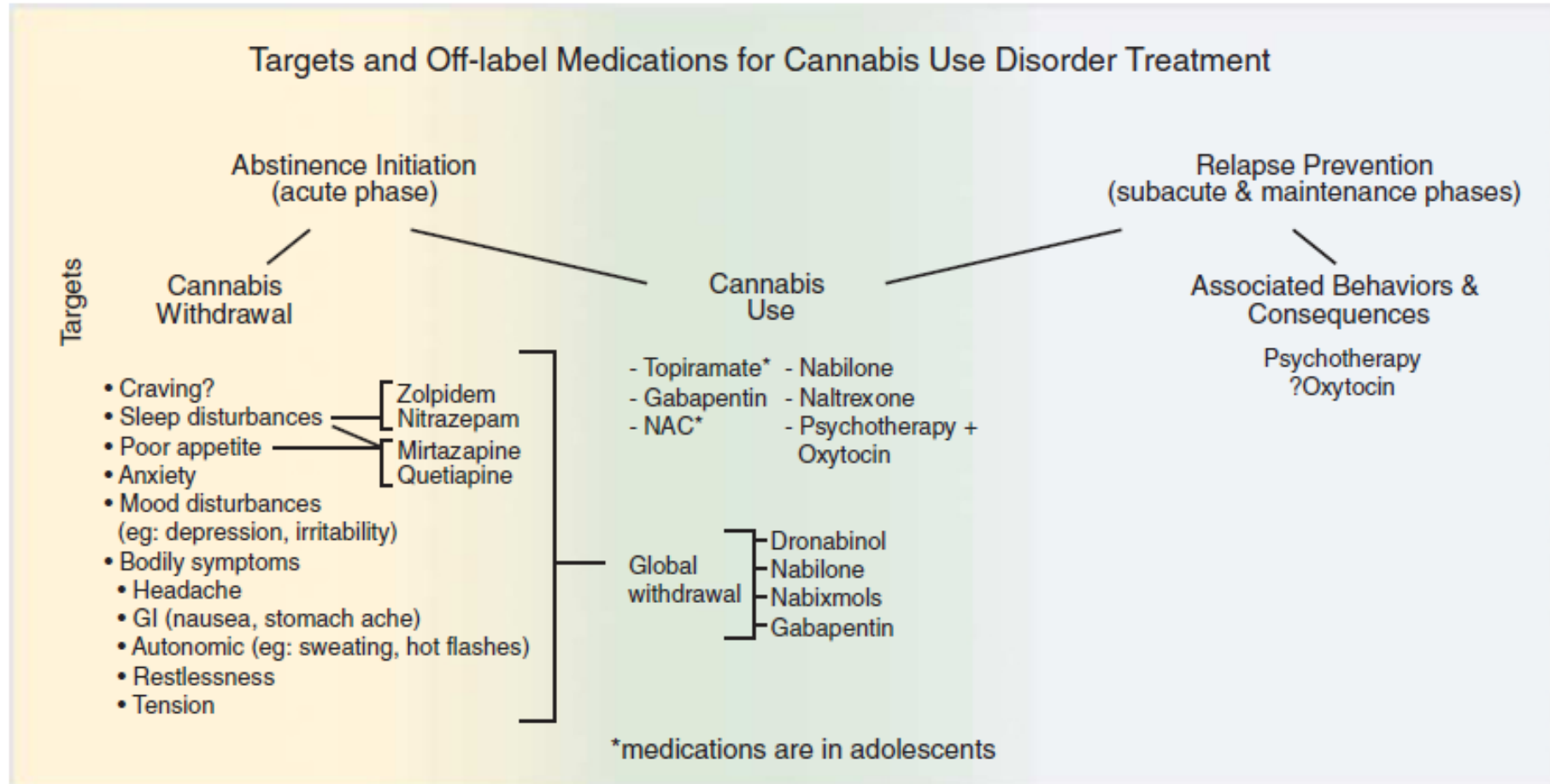


# CUD: TRATTAMENTO FARMACOLOGICO

|                        |  |   |  |  |
|------------------------|--|---|--|--|
| Gabapentin             | Blocks $\alpha_2\delta$ subunit on voltage gated Na channels, indirect GABA modulator; restores brain CRF-mediated homeostasis | Withdrawal, cognitive performance, cannabis use, problems secondary to cannabis | Encouraging for use in withdrawal, reductions, craving, cognitive functioning, and improvement in problems | Mason <i>et al</i> , 2012 (T)  |
| Topiramate             | Blocks Na and Ca channels, potentiates GABA-A; AMPA/kinate glutamate antagonism  | Cannabis use  | Encouraging for its reduced use in adolescents, not well tolerated, slower titration may help              | Miranda <i>et al</i> , 2016 (T)  |
| Dronabinol             | CB-1 agonist   | Withdrawal<br>Cannabis use  | Encouraging for reductions in global withdrawal symptoms   | Haney <i>et al</i> , 2004 (L)<br>Budney <i>et al</i> , 2007 (L)<br>Levin <i>et al</i> , 2011 (T) |
| Dronabinol +lofexidine | CB-1 agonist+ $\alpha_2$ agonist   | Withdrawal<br>Cannabis use  | Lofexidine adds no benefit and is poorly tolerated to dronabinol monotherapy                               | Haney <i>et al</i> , 2008 (L)<br>Levin <i>et al</i> , 2016 (T)                                   |
| Nabilone               | CB-1 agonist   | Withdrawal<br>Cannabis use  | Encouraging for its reductions in withdrawal and cannabis use  | Haney, 2013b (L)   |
| Nabilone +zolpidem     | CB-1 agonist+GABA-A activity   | Withdrawal, withdrawal-related sleep disturbance, cannabis use                  | Encouraging for reductions in withdrawal and cannabis use  | Hermann <i>et al</i> , 2016 (L)  |
| Nabixmols              | CB-1 agonist+multi functions (through CBD)   | Withdrawal<br>Cannabis use  | Encouraging for use in withdrawal  | Allsop <i>et al</i> , 2014 (T/I)   |
| Cannabidiol            | Multifunctional  | Cannabis use  | Limited, if any  | Haney <i>et al</i> , 2016 (L)  |
| Rimonabant             | CB-1 antagonism  | Cannabis use  | Limited if any due to discontinued use/ safety risk  | Huestis <i>et al</i> , 2001 (L)<br>Huestis <i>et al</i> , 2007 (L)                               |
| Naltrexone             | Mu opioid antagonism   | Cannabis use  | Encouraging for reductions in use when chronically dosed   | Cooper and Haney, 2010 (L)<br>Haney <i>et al</i> , 2015 (L)                                      |
| N-acetylcysteine       | Cysteine prodrug (cysteine–glutamate exchanger)  | Cannabis use  | Encouraging for reductions in use in adolescents; limited use in adults                                    | Gray <i>et al</i> , 2012 (T)<br>Gray, 2017 (T)   |
| Oxytocin               | Neural roles in prosocial behavior   | Cannabis use (indirectly by enhancing psychosocial treatment)                   | Encouraging for enhancement of psychosocial treatment  | Sherman <i>et al</i> , 2017 (T)  |



# CUD: TRATTAMENTO FARMACOLOGICO



## Pharmacotherapies for cannabis dependence (Review)

Nielsen S, Gowing L, Sabioni P, Le Foll B

## AUTHORS' CONCLUSIONS

### Implications for practice

Studies undertaken to date on pharmacotherapies for cannabis dependence are insufficient to guide clinical practice. There is incomplete evidence for all of the pharmacotherapies investigated in this review.

At this point in time, psychological approaches such as MET and cognitive-behavioural therapy remain the mainstay of treatment for cannabis use disorders.

# CUD: TRATTAMENTO APPROCCIO PSICOSOCIALE

| Psychosocial approaches                | Description and mechanisms   | Treatment sessions <sup>a</sup> , typical duration <sup>a</sup> , and format   | Effectiveness (0.2 small; 0.5 medium; 0.8 large) <sup>b</sup>                      | Confidence in evidence <sup>b</sup>  |
|--|--|--|--|--|
| Cognitive behavioural therapy (CBT)    | Considers cannabis use disorder (CUD) a learnt behaviour and aims to identify and modify dysfunctional thoughts (cognition) and actions (behaviour). Involves the therapist and patient working collaboratively to identify triggers for cannabis use. Addresses cognitive, affective and interpersonal triggers for cannabis use by increasing cannabis refusal self-efficacy, identifying and modifying cannabis use outcome expectancies, improving problem-solving skills and developing more effective coping strategies, including relaxation approaches   | 1–14 sessions over 12–18 weeks; delivered in face-to-face or online format, in inpatient, outpatient or community setting; in individual or group format         | Medium   | Moderate to high   |
| Motivational enhancement therapy (MET) | A patient-centred approach to enhance motivation to change unhealthy behaviour using a collaborative therapeutic relationship that encourages patients to recognize and resolve their ambivalence towards cannabis use. Strategies include therapist empathy, respect and a non-judgemental perspective, in conjunction with collaborative identification of discordance between the patient's present and desired health (goal–status discrepancy), recognizing resistance to change and assisting the patient to assess the pros and cons for change. In later stages, the therapist helps the patient to recognize risk factors and increase personal self-efficacy to change. MET offered in its briefest form (one session) may not be as effective as longer forms | 1–4 sessions over 4–14 weeks; delivered face-to-face or online, in inpatient, outpatient or community setting; in individual or group format                     | Medium (zero to small effects for brief MET)                                       | Moderate to high (low for brief MET)   |
| Contingency management                 | Based on operant theory, contingency management uses tangible reinforcers, such as money or vouchers, to increase positive cannabis treatment outcomes (such as session attendance, therapy-related 'homework' completion and abstinence). The incentives or reinforcers can be modified by the therapeutic team to increase compliance, e.g. by changing the immediacy and/or the magnitude of the incentive. Contingency management strategies that reward are more effective than those that punish   | 9–12 sessions for 9–12 weeks; delivered in a face-to-face format in outpatient or community setting, in an individual or group format                            | Medium (when applied as an adjunctive treatment to CBT, MET or CBT and MET)        | Moderate as an adjunctive treatment; more data are required to assess contingency management as a stand-alone treatment; requires more translatable evidence |
| CBT and MET                            | Combination of CBT and MET. MET is used in the early stages of treatment to engage patients and assist in goal setting and is then followed by CBT   | 2–14 sessions for 4–56 weeks; delivered face-to-face or online, in inpatient, outpatient or community setting; can be delivered in an individual or group format | Medium: some evidence that MET and CBT interventions outperformed MET or CBT alone | Moderate to high   |

- Social support Counselling
- Drug education Counselling
- Relapse prevention
- Mindfulness Meditation
- Mutual help programmes
- Individual, group- based and family-based

Number of studies examining each type of psychotherapy in the two reviews combined.

| Type of psychotherapy examined | Number of studies focusing on this intervention | Reference of studies   |
|--------------------------------|---|------------------------|
| SS                             | 2   | [20,23]                |
| MM                             | 1   | [29]                   |
| DC                             | 2   | [27,31]                |
| DC + CBT                       | 1   | [30]                   |
| DC + CM                        | 1   | [27]                   |
| CM alone                       | 3   | [26,28,35]             |
| MET                            | 7   | [17,19,24,25,36,39,40] |
| MET + CM                       | 1   | [22]                   |
| CBT                            | 5   | [18–20,23,28]          |
| CBT + CM                       | 2   | [26,28]                |
| MET + CBT                      | 9   | [17,21,27,32–35,37,38] |
| MET + CBT + CM                 | 5   | [17,21,27,35,37]       |

CM: Contingency management; CBT: Cognitive-behavioral therapy; DC: Drug counseling; MET: Motivational enhancement therapy; MM: Mindfulness-based meditation; SS: Social support.



# THC: UNITA' STANDARD

**Table 3** Existing proposals for standard cannabis units/standardized measures of quantity.

| First author, year     | Reference | Standard cannabis unit | Description   | Strengths: accounts for                                      | Limitations: does not account for  |
|------------------------|-----------|------------------------|---|--|--|
| Wetherill, 2016        | [61]      | Gram years             | Number of daily grams consumed, multiplied by years of cannabis use   | Some different methods of administration                     | Variation in quantities of THC per gram of cannabis; other methods of administration (e.g. vaporizer, vape pen, edible, liquid)                  |
| Casajuaana-Kögel, 2017 | [62]      | Standard joint unit    | 1 unit = 1 joint, or 0.25 g cannabis, or 7 mg THC, or 1 Euro  | The most common method of administration in Europe           | Variation in quantities of THC per joint; other methods of administration (e.g. pipe, blunt, bong, dabbing, vaporizer, vape pen, edible, liquid) |
| Ziesser, 2012          | [63]      | Standard joint         | 1 standard joint = 0.5 g cannabis, 10 puffs, or 5 bong hits, or 5 pipe hits   | Some different administration methods and/or number of puffs | Variation in quantities of THC; other methods of administration (e.g. blunt, dabbing, vaporizer, vape pen, edible, liquid)                       |
| Norberg, 2012          | [64]      | Cannabis unit          | 1 unit = 0.25 grams cannabis, or 1 paper joint or 1 blunt, or 2 skinny paper joints/blunt, or 3 cones/water pipes/bongs/ bucket bongs | Some different sizes of joint and methods of administration  | Variation in quantities of THC; other methods of administration (e.g. pipe, dabbing, vaporizer, vape pen, edible, liquid)                        |
| Hindocha, 2017         | [65]      | THC/CBD ratios         | High THC & low CBD (e.g. 1 unit = 0.25 g)<br>Equal THC & CBD (e.g. 1 unit = 0.50 g)<br>High CBD & low THC (e.g. 1 unit = 0.75 g)      | Variation in THC/CBD ratios                                  | Complete variation in quantities of THC per gram of cannabis; other methods of administration (e.g. vaporizer, vape pen, edible, liquid)         |



**Panel: Summary of guidance on the standard THC unit**

The standard THC unit:

- is defined as any formulation containing 5 mg of THC;
- applies to both natural and synthetic THC formulations;
- is specific to THC and does not apply to other cannabis constituents for which standard units have not been established;
- should be used to report the dose of THC administered to or consumed by research participants; pharmacokinetic parameters should be reported using conventional units (eg, ng/mL or ng·h/mL).

Additionally:

- Examples of reporting are as follows: 10 mg THC = 2 standard THC units, 16 mg THC = 3.2 standard THC units; a suggested abbreviation is STU.
- Research studies can administer more (or less) than 5 mg THC as necessary, but results should be expressed in multiples (or fractions) of the standard THC unit.
- Investigators are expected to report the standard THC unit in funding applications, progress reports, and dissemination of results through publications, posters, and other materials. This does not preclude additional reporting of results using other measures (eg, mg of THC).
- There is no requirement to report any other new information other than the standard THC unit.
- Other cannabis constituents can be reported as they typically would be, if relevant.
- If it is not possible to report the standard THC unit, researchers should provide justification for this (eg, a specific dataset or survey instrument might not provide the necessary information needed to convert the amount of THC into standard THC units).



# RIDUZIONE DEL DANNO: Lower-Risk Cannabis Use Guidelines

|   |   |  |
|---|---|--|
| <p><b>General Precaution A:</b> People who use cannabis (PWUC) need to know that there is <b>no universally safe level</b> of cannabis use; thus, the only reliable way to avoid any risk for harm from using cannabis is to abstain from its use</p> | <p><b>General Precaution B:</b> Frequent cannabis use, and especially <b>intensive use over longer periods</b>, can lead to a 'cannabis use disorder' (CUD) or cannabis dependence, that may require treatment</p>  | <p><b>General Precaution C:</b> PWUC should exercise <b>social consideration and responsibility</b> in avoiding cannabis use that may result in harm-to-other</p>  |
| <p><b>Recommendation #1:</b> The initiation of cannabis use should be <b>delayed until after late adolescence</b>, or the completion of puberty, to reduce development-related vulnerabilities for harm</p>   | <p><b>Recommendation #2:</b> PWUC should use <b>'low-potency'</b> cannabis products, i.e., cannabis products with ideally lower total THC content, or a high CBD/THC content ratio</p>  | <p><b>Recommendation #3:</b> All main available modes-of-use options come with some risk for harm; PWUC should refrain from cannabis 'smoking' and employ <b>alternative routes-of-use</b> for pulmonary health protection</p>                                       |
| <p><b>Recommendation #4:</b> If use occurs by inhalation, PWUC should <b>avoid "deep inhalation"</b>, prolonged breath-holding, or similar inhalation practices</p>   | <p><b>Recommendation #5:</b> PWUC should refrain from frequent (e.g., daily or near-daily) or intensive (e.g., binging) cannabis use, and instead limit themselves to less frequent or <b>occasional use</b></p>  | <p><b>Recommendation #6:</b> Where circumstances allow, PWUC should use <b>legal and quality-controlled cannabis products</b> and use devices</p>  |
| <p><b>Recommendation #7:</b> PWUC who experience <b>impaired cognitive performance</b> should consider temporarily suspending or substantially reducing the intensity (e.g., frequency/potency) of their cannabis use</p>                             | <p><b>Recommendation #8:</b> PWUC should avoid driving a motorvehicle or operating machinery while under the influence of cannabis because of acute impairment and <b>elevated risk of crash involvement</b>, including injury or death; however, the severity and duration of impairment vary depending on multiple factor</p> | <p><b>Recommendation #9:</b> It is prudent for people who intend to procreate and for women who are <b>pregnant or breastfeeding</b> to abstain from cannabis use towards reducing possible risks for reproduction and of health harm to offspring, respectively</p> |
| <p><b>Recommendation #10:</b> PWUC should exercise general caution in <b>combining other psychoactive substances</b> with cannabis use</p>  | <p><b>Recommendation #11:</b> Some <b>specific groups</b> of people are at elevated risk for cannabis use-related health problems because of biological pre-dispositions or co-morbidities. They should accordingly (and possibly on medical advice as required) avoid or adjust their cannabis use</p>                         | <p><b>Recommendation #12:</b> The combination of <b>risk-factors for adverse health outcomes</b> from cannabis use further amplifies the likelihood of experiencing severe harms and should be avoided</p>   |

# PREVENZIONE E RIDUZIONE DEL DANNO

## A Guide to Cannabis for Older Adults

### What Is Cannabis?

Cannabis, commonly called marijuana, pot or weed, is a product made from the cannabis plant. It is often used for non-medical purposes because of its intoxicating effects or the "high" it produces. Cannabis can also be used for medical purposes. However, for most health conditions, more research is still needed to determine whether it is effective. Cannabis contains over 100 chemical compounds called cannabinoids. The two best-known cannabinoids are:

- **Tetrahydrocannabinol (THC)** is the primary "psychoactive" component of cannabis. It is the ingredient in cannabis that produces the high. Research suggests that THC might have some medical benefits for certain health conditions.
- **Cannabidiol (CBD)** does not produce a high, but can cause drowsiness. Scientists are also studying CBD for its medical applications.

Cannabis comes in many forms, including dried cannabis, cannabis extracts and cannabis topicals. Edible cannabis products, commonly known as edibles, are cannabis-infused food (e.g., chocolate) and drinks (e.g., tea).

### Did You Know?

Concentrations of THC in dried cannabis have increased over the past few decades. In 1995, dried cannabis contained about **4% THC**. Nowadays, it averages about **15–20% THC**.

Some cannabis extracts, called concentrates, can contain **more than 80% THC**.

There are also cannabis products that are made up mostly of CBD and contain only small amounts of THC.

**Always read the label to check the amount and concentrations of THC and CBD.**

### What Can I Expect When Using Cannabis?

Cannabis affects everyone differently.

Smoking, vaping or eating cannabis products can lead to feelings of euphoria (happiness) and relaxation. It can also cause impairment, which can include:

- Concentration and memory problems
- Impaired motor skills and slower reaction time that can increase the risk of falls and injury

Cannabis can impair your ability to drive safely. Cannabis-impaired driving is illegal.

Consuming too much cannabis or cannabis with higher levels of THC can lead to over-intoxication. Symptoms can include:

- Anxiety, panic and elevated heart rate
- Nausea and vomiting
- Paranoia and psychosis (i.e., hallucinations and delusions)

If you or someone you know has consumed too much cannabis and is not feeling well, seek medical attention.



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## COVID-19 and CANNABIS

### How to reduce your risk

If you plan to use or are using cannabis, there are things you can do to help reduce the spread of COVID-19 and the risks to your health.



#### Don't share joints, vaping devices, pipes or bongs.

- COVID-19 spreads through respiratory droplets released when people speak, cough or sneeze. You can pick it up if you put items contaminated by droplets — which can include joints, vaporizers, pipes and bongs — in your mouth or touch them and then touch your eyes, nose or mouth.



#### Wash your hands before putting any cannabis product to your mouth.

- Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use alcohol-based hand sanitizer.



#### If you plan to smoke or vape cannabis, know that it can negatively affect your lung health.

- Try to limit cannabis smoking or vaping to once a week, if possible.
- Avoid smoking or vaping cannabis if you feel sick.
- Avoid taking deep inhalations and try not to hold your breath.
- Use products that contain no more than 100 mg/g (10%) THC content.
- Follow **Canada's Lower-Risk Cannabis Use Guidelines** to reduce your risk of experiencing harms when using cannabis.



#### Purchase your cannabis from licensed and regulated retailers.

- Purchasing cannabis from illegal sources has negative health and safety risks, as the quality of the product cannot be guaranteed and it can be contaminated with other substances (metals, pesticides, fungi, other drugs, etc.).



#### Cannabis can interact with your medication and negatively affect your health.

- If you take medications, whether prescribed or over the counter, talk to your healthcare provider before using cannabis.
- If you are using cannabis for medical reasons, talk to your healthcare provider about your use during the COVID-19 pandemic.



For more information, visit our COVID-19 resources page at [www.ccsa.ca](http://www.ccsa.ca)

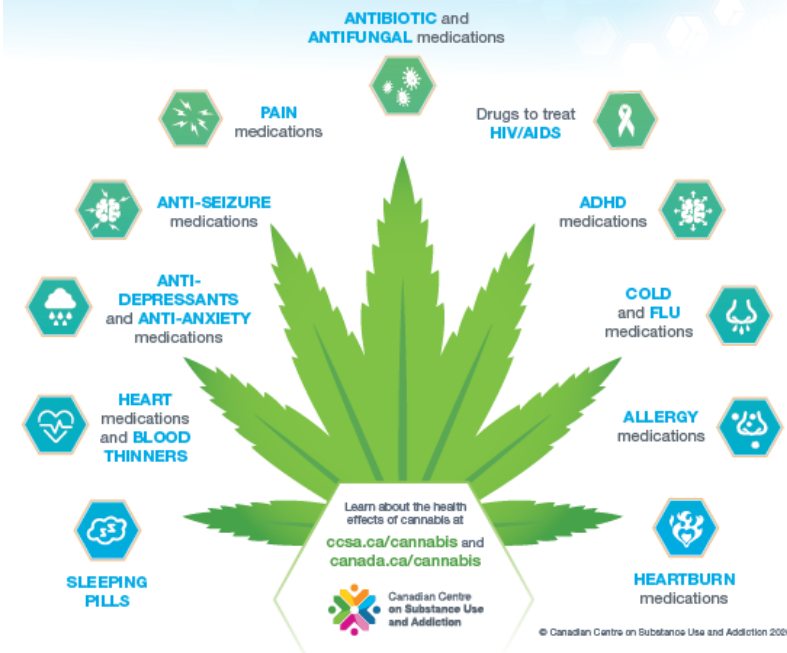
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## Cannabis and Your Medication

Cannabis can interact with your medications and affect your health.

For more information, talk to your healthcare provider.

### Medications that can interact with cannabis



# PREVENZIONE E RIDUZIONE DEL DANNO

## How To Safely Store Your Cannabis



### Labels on all cannabis products

- All legal cannabis products will have a label
- Make sure the label is always clearly visible
- If you make your own edible cannabis products, be sure to properly label them

### Label examples



### Store in child-safe containers

- All legal cannabis products must be in child-resistant packages
- Make sure they are appropriately re-sealed after use
- Consider investing in a lockbox



### Keep out of reach and sight of children and pets

- Make sure you properly store and dispose of cannabis products in a place that is not easily visible and accessible by children or pets



### Stay informed

[ccsa.ca/cannabis](https://www.ccsa.ca/cannabis)  
[canada.ca/cannabis](https://www.canada.ca/cannabis)



Evidence, Engagement, Impact.

## Cannabis and Other Substances

Cannabis used with other substances can lead to negative impacts on your health.



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Learn about the health effects of cannabis at  
[ccsa.ca/cannabis](https://www.ccsa.ca/cannabis) and [canada.ca/cannabis](https://www.canada.ca/cannabis)

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## Know the Health Risks of Cannabis



### Mental Health

Daily or near-daily use of cannabis can contribute to dependence and mental health problems over time.



### Driving

Cannabis can impair your motor coordination, judgment and other skills required for safe driving.



### Respiratory Effects

Toxic and carcinogenic chemicals found in tobacco smoke are also found in cannabis smoke, and can affect the lungs and airways.



### Pregnancy

Substances in cannabis are transferred from mother to child and can affect your baby. Not using cannabis if pregnant or breastfeeding is the safest option.



### Edible Cannabis

Consuming too much THC can lead to over-intoxication, which includes intense anxiety, vomiting and symptoms of psychosis (paranoia).



### Cannabis Extracts

Cannabis extracts with high THC content increase the risk of over-intoxication and addiction.



### Stay Informed

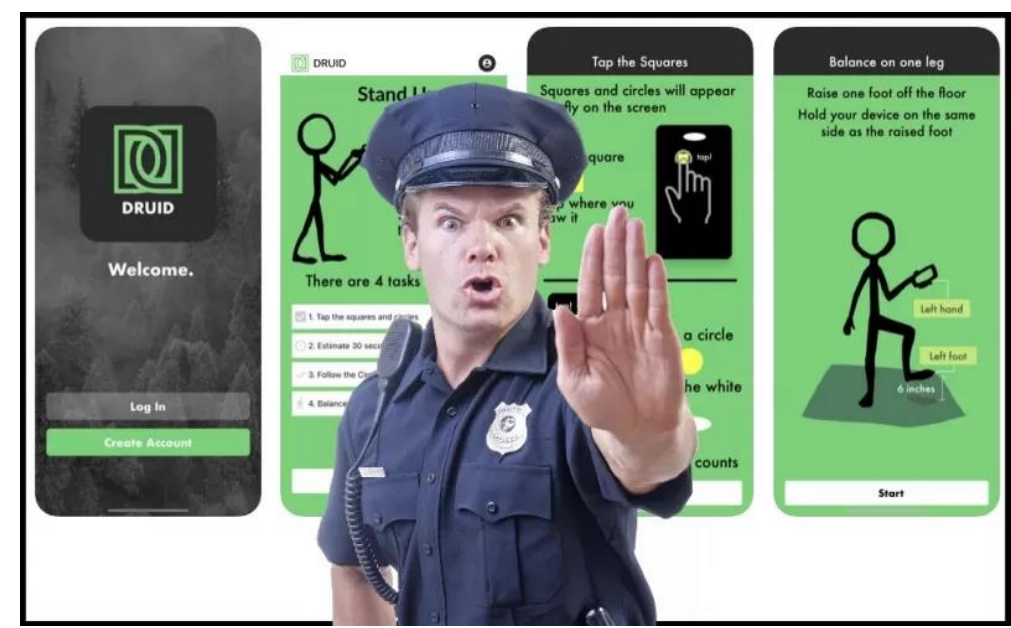
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Evidence, Engagement, Impact.



# PREVENZIONE E RIDUZIONE DEL DANNO





# CONCLUSIONI

| Trends in attitudes toward cannabis legalisation and perceptions about cannabis   |              |
|---|--------------|
| Support for cannabis legalisation   | ↑            |
| Perceived harmfulness of cannabis use   | ↓            |
| Trends in cannabis prices and potencies   |              |
| Prices of legal cannabis  | ↓            |
| Potencies of cannabis products  | ↑            |
| The impact of cannabis legalisation on prevalence of cannabis use and CUD   |              |
| Adolescent cannabis use   | <b>MIXED</b> |
| Adolescent cannabis use disorder  | ↓            |
| Adult cannabis use  | ↑            |
| Adult cannabis use disorder   | <b>MIXED</b> |
| Adult subgroups (gender, race, socioeconomic status, marital status) and Specific populations (pregnant, older, disabled) | ↑            |
| The impact of cannabis legalisation on prevalence of related adverse health effects                                       |              |
| Cannabis-related motor vehicle accidents  | <b>MIXED</b> |
| Cannabis-related health service presentations   | ↑            |

# CONCLUSIONI



Fenomeno in aumento e in mutamento

Nuove modalità di consumo

Nuovi approcci di ricerca

Individuare le traiettorie psico-patologiche

Individuare il target del trattamento

Nuovi strumenti di trattamento

Nuove modalità di presa in carico trattamento

Attività di riduzione del danno