



PROJECT

# évi<sup>ct</sup>



Working group for the study and addressing the control policies of **cannabis** and **tobacco** poly-consumption in Spain.

## Summaries, key ideas and proposals for action.



Financed by:



## Coordination:

Ana Esteban Herrera

## Authorship

Ana Esteban Herrera

Adelaida Lozano Polo

Esteve Saltó Cerezuela

Joseba Zabala Galán

## Authors of the ÉVICT 2015 Report

Arturo Álvarez Roldán

Otger Amatller Gutiérrez

Fernando Caudevilla Gálligo

Juan F. Gamella Mora

Isabel Germán Mancebo

Marc Grifell Guàrdia

Manuel Isorna Folgar

José Javier Moreno Arnedillo

Eduardo Olano Espinosa

Ana Palmerín García

Iván Parra Toro

M<sup>a</sup> Cristina Pinet Ogué

Francesca Sánchez Martínez

Josep María Suelves i Joanxich

Leyre Urigüen Echeverría

## Documentary support

Olga Mínguez López

## Review group

Juan Carlos Arboniés Ortiz, Carles Ariza i Cardenal, F. Javier Ayesta Ayesta, Mercè Balcells Olivero, Elisardo Becoña Iglesias, Eugeni Bruguera Cortada, Luis F. Callado Hernando, Francisco Camarells Guillem, Leonor Cano Pérez, Joan Colom Farran, Rodrigo Córdoba García, Regina Dalmau González-Gallarza, Juan del Pozo Irribarría, José Luis Díaz-Maroto Muñoz, Vicenta Esteve Biot, Andrea Gallego Valdeiglesia, Antonio Lagares Roibas, Miguel Ángel Landabaso Vázquez, Immaculada Malé Pegueroles, José Javier Meana Martínez, Isabel Nerín de La Puerta, Enriqueta Ochoa Mangado, M<sup>a</sup> Ángeles Planchuelo Santos, Fernando Rodríguez de Fonseca, Francisco Rodríguez Lozano, Pablo Rubinstein Aguñín, Teresa Salvador Llivina, Josep Solé Puig, Rosa Suárez Vázquez, Urbano Vázquez Fernández y Joan Ramón Villalbí Hereter.



## INTRODUCTION

### *"Untying the CANNABIS-TOBACCO knot"*

In the first semester of 2015, the first évict report was written and launched by the National Committee for Tobacco Prevention and financed by the National Plan on Drugs, with the participation of over 50 experts coming from different backgrounds and fields of knowledge that created the évict group for the study of **CANNABIS-TOBACCO POLY-CONSUMPTION**. Throughout this period, they have worked face-to-face or virtually for the elaboration of this first report. Coordinated by the Management Group, the main objective of this Group was the following:

"Provide scientific evidence in order to improve public health education and control policies aimed at decreasing the initiation and the damage caused by the cannabis-tobacco phenomenon. Pull together professionals, organizations and different administrations related to it in order to create individual and social spaces of work and synergy that provide awareness and offer our society efficient preventive ideas and practices"

Thus, every professional presented his/her perspective and effort in his field in order to untie the symbolic knot between these two substances. It is important to underline that people with different fields of knowledge such as neurophysiology, pharmacology, anthropology, clinic, economy, law... and different ideas, sometimes divergent, collaborated and joined forces to resolve this scientific dilemma through shared evidence.

This first évict report (it is possible to read a summary below) represents our initial contribution to the study of the cannabis-tobacco pairing and the comprehension of this unquestionable growing phenomenon that our society is experiencing in the second decade of the XXI century.

*Joseba Zabala*



# INDEX

## 1. EPIDEMIOLOGY AND RELATIONSHIP BETWEEN CANNABIS AND TOBACCO CONSUMPTION

- 1.1. Epidemiology of tobacco and cannabis consumption. *Arturo Álvarez, Juan F. Gamella, Iván Parra and Josep María Suelves*
- 1.2. Relationship between tobacco and cannabis. Progression of consumption. *Cristina Pinet, Eduardo Olano and Javier Moreno*

## 2. UNDERSTANDING THE CANNABIS- TOBACCO PAIRING

- 2.1. The substances:
  - 2.1.1. Anatomy of a joint. *Marc Grifell*
  - 2.1.2. Addiction to tobacco and cannabis pharmacology and neurobiology. *Leyre Urigüen*
- 2.2. The person:
  - 2.2.1. Risk and protection factors related to drugs consumption. *Ana Palmerín*
- 2.3. Social context:
  - 2.3.1. Family risk factors that favor the consumption of tobacco and cannabis. *Manuel Isorna and Otger Amatller*
  - 2.3.2. Influence of social and economic context in the pairing cannabis – tobacco. *Arturo Álvarez, Juan F. Gamella and Iván Parra*
  - 2.3.3. Regulations on tobacco and cannabis. *Isabel Germán*

## 3. CLINICAL EFFECTS AND CONSEQUENCES OF CANNABIS AND TOBACCO CONSUMPTION

*Eduardo Olano, Leyre Urigüen, Cristina Pinet and Javier Moreno*

## 4. EFFICIENT STRATEGIES AND TOOLS FOR PREVENTION AND TREATMENT

- 4.1. Prevention
  - 4.1.1. School prevention of tobacco and cannabis consumption. *Josep María Suelves*
  - 4.1.2. Selective and indicated prevention strategies. *Francesca Sánchez*
  - 4.1.3. Risk and damage reduction. *Fernando Caudevilla and Eduardo Olano*
- 4.2. Treatment. *Javier Moreno, Eduardo Olano and Cristina Pinet*



# 1. EPIDEMIOLOGY AND RELATIONSHIP OF CANNABIS AND TOBACCO

## 1.1. EPIDEMIOLOGY OF TOBACCO AND CANNABIS CONSUMPTION

### Summary

In Spain, the consumption of tobacco is closely linked to the consumption of other substances, above all alcohol and cannabis derivatives. The results of the survey, ESTUDES 2012, show that 60% of Spanish school children between 14 and 18 years of age who admitted to having smoked tobacco within the previous 12 months, have also smoked cannabis. Whereas, 79.4% of school children who admitted to having smoked cannabis in the previous 12 months, have also smoked tobacco. If we compare the consumption of the three substances in the general population (EDADES 2011) with that of the adolescent population (ESTUDES 2012), we can see that the percentage of people that smoke and drink daily was higher among the general population than the school-aged population, but for daily consumption of cannabis it was not the same, because no differences have been shown between the two demographics. The average age of first consumption of tobacco is 1 or 2 years lower than that of cannabis derivatives. Most adolescents that smoke cannabis derivatives have previously tried tobacco, even if there is a minority whose consumption of cannabis is prior to that of tobacco.

### Key ideas

- > Epidemiological data on the consumption of tobacco, cannabis and alcohol in Spain, shows that a close relationship between the use of these substances exists.
- > The use of tobacco and cannabis starts during adolescence. Consumption is prevalent among the general population and, above all, among young people.
- > According to the EDADES 2011 and ESTUDES 2012 surveys, the probability of using each one of the substances (alcohol, cannabis, tobacco) increases when one of the other two is used. The probability of smoking cannabis, if tobacco is used, multiplies by 2.2 among the general population and by 2,8 for the school-aged population. In the same way, the probability of smoking tobacco, if cannabis is used, multiplies by 2.3 among the general population and by 1.3 among the school-aged population.



## Proposals for action

- > New epidemiological studies are required for the visualization of cannabis and tobacco poly-consumption.
- > It is necessary to include new questions in ESTUDES and EDADES surveys in order to correctly control the cannabis-tobacco pairing. Dividing the three possible categories of consumption: 1. Tobacco rolled alone, 2. Cannabis rolled alone and 3. Cannabis mixed with tobacco that is the usual way of smoking joints. This is the only way to control the decisive confounding factor that exists in every survey.
- > It is important to continue controlling the starting age of consumption of both substances to detect changes on time of gateways between the possible poly-consumptions.

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- En este capítulo se han utilizado datos procedentes de la Encuesta sobre Uso de Drogas en Enseñanzas Secundarias en España (ESTUDES) del año 2012 y de la Encuesta sobre Alcohol y Drogas en Población General en España (EDADES) del año 2011, facilitados por la Delegación del Gobierno para el Plan Nacional sobre Drogas.



## 1.2. RELATIONSHIP BETWEEN CANNABIS AND TOBACCO. PROGRESSION OF CONSUMPTION

### Summary

There is a progression between the first consumption of substances and more serious addiction stages. In the case of tobacco and cannabis, in addition to biographical or contextual risk factors that are common at the beginning and maintenance of both consumptions, the relationship between these two substances, modifying the progression in these stages, is very well documented considering the transition from tobacco to cannabis, with tobacco being one of the drugs used early on and considered the gateway to other substances. Only recently, because of epidemiological reasons, an interest in "reverse" gateway has been shown, in other words the use of cannabis that influences that of tobacco. At present, there is evidence that first consumption can be combined and that there is a double influence.

### Key ideas

- >Historically, cannabis has not been considered a risk factor for tobacco, because its consumption is thought to be subsequent to that of tobacco. Nevertheless, recent studies on "reverse" gateways from cannabis to tobacco exist.
- >At present, there is evidence that first consumption can be combined and that there is a double influence.
- >Different studies do not find evidence of a causal relationship between tobacco and cannabis consumption, instead, they argue that the association between both consumptions could be partially explained as a result of the influence of factors relating the person, the substances and the context, independently of which consumption came first.

### Proposals for action

- >Since there is a close relationship, the consumption of tobacco has to be dealt with in the context of preventive or therapeutic actions addressed to cannabis consumption and vice versa.



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## 2. UNDERSTANDING THE CANNABIS- TOBACCO PAIRING

### 2.1. THE SUBSTANCES

#### 2.1.1. ANATOMY OF A JOINT

##### Summary

The *joint* is the most common way of cannabis-tobacco poly-consumption in Spain. Although it is estimated that most *joints* consumed mix both substances, there are a great variability of effects and results depending on different kinds of cannabis (hashish, marijuana, oil...) although in Spain the habit of mixing both substances is generalized, there is no verifiable data evaluating the different kinds of mixes and consumption of cannabis-tobacco.

##### Key ideas

- > A great variability of effects exists between the consumption of different kinds of *joint*.
- > Inhalation is currently the only way of mixed consumption of both substances. This causes risks and damages related to alveolar access and the high speed of absorption.
- > Elements such as the filter, the paper, the contents, the way both substances are mixed and also the rolling method give a personal touch and a group style to the users and poly-consumers of both cannabis-tobacco substances.

##### Proposals for action

- > Carrying out multifocal researches and surveys in different consumption contexts (high schools, cannabis users clubs, primary care and mental health facilities) is necessary. These studies need to provide reliable data on the reality and the tendencies of this poly-consumption.
- > Proposal to the creators of ESTUDES and EDADES surveys to insert specific items in the questionnaire related to cannabis-tobacco poly-consumption that can provide a detailed vision of this knot.



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## 2.1.2. ADDICTION TO TOBACCO AND CANNABIS PHARMACOLOGY AND NEUROBIOLOGY

### Summary

Nicotine is the principal psychoactive constituent in the tobacco plant, responsible for the development of tobacco addiction. Tetrahydrocannabinol is the cannabinoid constituent with the highest psychoactive ability that contributes the most to cannabis addiction.

Cannabis and tobacco poly-consumption could produce complementary, antagonistic or synergic effects. In addition, genetic evidence exists that could influence the specific use of tobacco/cannabis.

### Key ideas

> Nicotine and tetrahydrocannabinol are the principal psychoactive constituents in the tobacco and cannabis plants respectively.

> There is evidence, through experimentation, that the block of cannabinoid receptors with antagonists, dose-dependently attenuates the nicotine self-administration.

> It has been proposed that one of the reasons why tobacco and cannabis are used in a combined way is to attenuate the adverse and/or aversive effects of each of them. Thus, cannabis users could use tobacco to attenuate effects on cognition.

### Proposals for action

> New studies on tobacco-cannabis poly-consumption are required relating to both its perceived effects (complementary, antagonistic or synergic) and to its molecular interaction and in neurotransmitter systems.



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## 2.2. THE PERSON

### 2.2.1. RISK AND PROTECTION FACTORS RELATED TO DRUG CONSUMPTION

#### Summary

Many studies have been done on risk and protection factors, but there is no consensus and a greater analysis on them. Until now, evidence has shown that most factors are applicable to all substances, even if the analysis studies the substances independently. Most of them deal with tobacco and alcohol in a combined way but not cannabis and tobacco. One of the postulates with the most scientific consensus is that regarding the importance of gender, age and culture in risk and protection factors. Nevertheless, few studies consider them. It is unavoidable to continue going further in this field due to the very changeable context in which we live. It should be necessary to review and adapt the prevention programs to the new scenarios of dual consumption. Keeping in mind the importance of biological and genetic variables, when it comes to prevention programs it is necessary to consider individual and contextual variables.

#### Key idea

> Give impetus to protection factors, because most of them are highly changeable for the application of prevention programs, above all those related to the person's psychological make up.

#### Proposals for action

> Longitudinal studies are required in Spain to analyze the influence of these factors on simultaneous cannabis and tobacco use and its possible transition to the consumption of other illegal substances.

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## 2.3. SOCIAL CONTEXT

### 2.3.1. FAMILY RISK FACTORS THAT FAVOR THE CONSUMPTION OF TOBACCO AND CANNABIS

#### Summary

There are different variables that could influence the possible contribution of family both at the beginning of consumption and in its maintenance. These variables are: family structure and composition, discipline, affective relationships and communication, cohesion, conflict, rules, family attitude and behavior related to consumption. Parents that use legal drugs and cannabis is the factor that influences the tobacco and cannabis consumption of their children the most.

#### Key ideas

- > Cannabis and tobacco are mixed beyond the physical effects. The meaning and functionality that they have in the family during adolescence or the position of parents when it comes to their own consumption and that of their children (the way the family handle smoking at home) seem to have a direct influence on the beginning and the evolution of consumptions.
- > The current debate related to subjects such as the medical use of cannabis, the legalization in some countries, the opening of cannabis clubs, the grow-shops etc... generate confusion and doubts between parents about the right way to face this issue on an educational level in the family.
- > Importance of family patterns in the context of risk behaviors.

#### Proposals for action

- > It is important to provide families with criteria and standards to attenuate disorientation due to the current debate originated on a media level about cannabis-related issues, such as legalization, medical use of cannabis, clubs etc...

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### 2.3.2. INFLUENCE OF SOCIAL AND ECONOMIC CONTEXT IN THE CANNABIS – TOBACCO PAIRING

#### Summary

The structure and operation of drug markets have a great influence on the impact, the prevalence and the consumption standards of these products. It is estimated that 394 tons of cannabis was consumed in 2013 in Spain. Although since then the prevalence declined by 1 percentage point (EDADES 2013), the volume of the hashish and marijuana market is still one of the most important in Europe, above France, Italy, United Kingdom and Germany.

#### Key ideas

- > There seems to be an exchanged flexibility between the prices of the three substances. An increase of 10% of the price of alcohol increases the likelihood of using cannabis by 4.17 percentage points. Whereas, an increase of 10% of the price of cannabis, decreases the likelihood of smoking tobacco by 1.32 percentage points.
- > The free marketing models of tobacco applied to cannabis would strengthen the cannabis industry, thus, it should be strategically necessary to explore other models that could reduce this impact.
- > The lessons learnt in the different attempts to regulate tobacco and alcohol markets, could be useful also for regulating cannabis and decreasing its impact on public health.

#### Proposals for action

- > It is advisable to control and follow the new regulating experiences in Uruguay, United States, Holland and Canada to observe their impact on the markets of both drugs thus avoiding an increase in consumption, above all for vulnerable groups such as minors.



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### 2.3.3. TOBACCO AND CANNABIS REGULATIONS

#### Summary

Tobacco and cannabis are substances that must be regulated separately and from different parts of the legal system, with the protection of health in both cases being the fundamental basis of the legislation.

With health being the central axis and prime reason for regulating the behaviors related to tobacco and cannabis, it is surprising that, on an autonomous and local level, some administrative rules have been created in the field of cannabis consumption. These rules omit in their justification the right to health protected in other rules of greater legal status.

#### Key ideas

- > It seems incongruous not dealing judicially with cannabis from a health protection point of view, even more so if we compare it with behaviour related to tobacco, socially much more widespread than cannabis.
- > Currently we are observing new cannabis production methods and marketing in different countries. This reflects an evolution of the drug policies related to this substance, cannabis being the central point of debate and change initiatives.
- > The World Health Organization Framework Convention on Tobacco Control had as a consequence a detailed regulation on tobacco, observing the incorporation of positions derived from the international agreements when establishing norms to this substance. Nevertheless, doing something similar for cannabis would force the creation of a new paradigm on an international level.

#### Proposals for action

- > Research on the impact of public policies on tobacco consumption is generating positive results. It is important to understand if the creation of a regulation of cannabis would provide similar results, therefore deep and careful reflection is needed.
- > When the new Law of Citizen Security comes into force, controlling the evolution of its development indicators will be required, and also the percentage of minors that will take part in the educational measures of indicated prevention, alternative to the payment of the fine and stipulated under the article 36 of the aforementioned Law.



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### 3. CLINICAL EFFECTS AND CONSEQUENCES OF CANNABIS AND TOBACCO CONSUMPTION

#### Summary

Both nicotine and tetrahydrocannabinol produce complex pharmacological effects on central nervous system, cardiovascular and respiratory systems etc. It has been studied that the simultaneous use of tobacco and cannabis leads to an increased likelihood of suffering from disorders caused by cannabis consumption, psychosocial problems and less likelihood of abstinence in the long term from cannabis, than sequential and separated use. Tobacco and cannabis consumption causes irritation of airways, cough, increased sputum, bronchospasm, bronchitis, dyspnea, pharyngitis and exacerbation of asthma and cystic fibrosis and the development of clinical criteria of chronic bronchitis. Various authors conclude that smoking tobacco and cannabis simultaneously leads to greater health problems than smoking just tobacco. There is evidence on the association between high cannabis consumption and an increased risk of psychotic symptoms.

#### Key ideas

- > Tobacco and cannabis consumption produce relevant consequences on health in the short and long term.
- > On a pharmacological level, the simultaneous consumption of cannabis and tobacco generates important interactions for the development of abuse and/or dependence.
- > Addiction to tobacco is possibly the most common undesired effect that affects cannabis consumers.
- > Various authors agree concluding that smoking tobacco and cannabis simultaneously leads to more health problems than smoking just tobacco.

#### Proposals for action

- > New studies on the clinical effects and consequences of the simultaneous consumption of tobacco and cannabis are required.



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## 4. EFFICIENT STRATEGIES AND TOOLS FOR PREVENTION AND TREATMENT

### 4.1. PREVENTION

#### 4.1.1. SCHOOL PREVENTION OF TOBACCO AND CANNABIS CONSUMPTION

##### **Summary**

There are numerous prevention measures for tobacco, cannabis and other drug consumption for school-aged people, even if not all of them are effective. Prevention measures at school can be in competition between them and other school activities, all important for education and promotion of health among adolescents. The most recent systematic reviews show that school programs for the prevention of smoking tobacco are effective, whereas they are a little less effective in the case of the abuse of other substances such as alcohol and cannabis. In our field, some programs have been effective in the case of universal prevention of tobacco consumption in the school environment. In addition to specific information, most school prevention programs of demonstrated effectiveness have common elements, addressed to social skills training, embracement of norms related to the use of substances and the resistance to social influences. We should progress by trying to overcome the boundaries created by organizational issues and develop a coordinated range of school prevention programs, suitable for the evolutionary situation of the consumption of these substances and for the needs of the students. From this perspective, tobacco, cannabis and other substances consumption prevention should not be in competition but improve its effectiveness and efficiency.

##### **Key idea**

> There is evidence of the effectiveness of school prevention programs, above all in the case of tobacco consumption, if these programs are addressed to social skills training, embracement of norms and the resistance to social influence, in addition to provide specific information.



### Proposals for action

- >It is necessary to study the effectiveness of prevention programs in young consumers of tobacco-cannabis and other drugs, suitable for the evolutionary situation of the consumption of both substances and for the needs of the students, in order to offer a coordinated range of programs.
- >It is important to prioritize the establishment of prevention measures in the educational syllabus. These measures should deal with general risk behaviour, considering that many scientific evidences indicate that.

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## 4.1.2. SELECTIVE AND INDICATED PREVENTION STRATEGIES

### Summary

The motivation in young people to quit smoking tobacco or cannabis is low. Nevertheless, the success in quitting is higher among young people than adults. According to different studies, the most effective strategies for quitting aimed at young people are based on group interventions that include cognitive behavioral therapy, considering social influences and strengthening the motivation in around eight sessions.

The interventions that in a simultaneous and specific way are addressed to the quitting of tobacco and cannabis consumption are limited. Most of them treat the consumption of



different substances in general and usually on the perspective of selective prevention, which can be restricting. Therefore, interventions specifically designed for the simultaneous consumption of tobacco and cannabis are necessary.

### Key ideas

>The most effective strategies for quitting aimed at young people are based on group interventions that include cognitive behavioral therapy, considering social influences and strengthening the motivation in around eight sessions.

>There are limited interventions of selective and indicated prevention that in a simultaneous and specific way are aimed at the quitting of tobacco and cannabis consumption.

### Proposals for action

>It is necessary to plan and evaluate interventions of selective and indicated prevention specifically designed for the simultaneous consumption of tobacco and cannabis.

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### 4.1.3. RISK AND DAMAGE REDUCTION

#### Summary

There is no specific bibliography on Risk Reduction in Cannabis-Tobacco. This is probably partially due to the fact that the creation of risk reduction programs is done according to what drug is considered to be the problem. In this way, even if heroine consumers usually also use tobacco and cannabis, the risk reduction programs are rarely aimed at these two substances. A similar example is that of people who just use tobacco and cannabis: programs would be aimed at the substance that is considered more problematic.

When tobacco consumption is considered more problematic, the reason can be the damage to organs that it can produce. Evidence shows that smoking less does not decrease the damage or the risk and it is advisable to avoid inhalation, even if some of the products called ENDS (Electronic Nicotine Delivery Systems) could be useful on the condition that their effectiveness and security is demonstrated. The risk reduction in cannabis could in this case be bound to the avoidance of inhalation or of combined consumption, because this could make the elimination of risks and damages related to conventional tobacco consumption easier.



When the most problematic consumption is cannabis, due to any circumstance, the consequences of tobacco consumption – usually more delayed in time- are not considered urgent.

### Key ideas

>The strategy of risk reduction in the tobacco-cannabis pairing can be possible in people that do not have the will to quit or in contexts where vulnerability or environmental risk situations of people and groups suggest it. In minors or experimental and sporadic consumers it is important to provide messages of no consumption through strategies and critical messages that make them aware of the risk of consumption and of their role as pawns for the interests of industries or legal and illegal cannabis-tobacco markets.

>The policies of risk reduction in cannabis-tobacco do not have to be universal strategies aimed in the same way at the general population but they need an obligatory adaptation to the target or collective group. This is going to increase the effectiveness of these policies.

>In case of direct repercussions on third parties (pregnancy, breastfeeding, driving vehicles, no smoking areas...) medical or psychiatric counter-indications or activities that require intellectual performance, *the message has to be of abstinence.*

>In the case of tobacco, unanimity exists in the convenience of promoting damages reduction strategies that could lead to the complete abstinence in the medium and long term. Nevertheless, a great divergence from the convenience of universally promoting strategies that do not tend to denormalize the consumption of tobacco exists.

>In the case of cannabis, there is an important current that affirms that risk reduction strategies are sensible, providing the most objective information possible about the effects, damages (in the medium-long term) and methods to reduce/avoid them. That is why critical ability and self-responsibility are encouraged, in a context where the members of the "cannabis culture" would be the protagonists.

### Proposals for action

>Promotion of new risk reduction programs, adapted different and various target groups.

>Using advances in the tobacco and alcohol control, it is interesting to carry out the study of externalities more in depth, considering the effects produced in third parties by

the consumption of tobacco-cannabis (respect for no smoking areas, consumption at school, university, work, tobacco-cannabis and vehicle driving, consumption in public areas and places with minors).

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## 4.2. TREATMENT

### Summary

As general principles on the treatment of tobacco-cannabis it is important to remember the recommendation of combined treatment, simultaneous or sequential, with the main aim of complete abstinence of both substances, and the personalized treatment plan, depending on each case, that include other possible disorders and social factors that can contribute to the maintenance of the attitude of consumption. The psychological treatment would be the first path, since clinical trials show their effectiveness. Different meta-analyses conclude that the clearest therapeutic option is a combination of motivational interviewing, cognitive behavioral therapy and incentive therapy with community reinforcement. Since often the consumer wants to quit the consumption of one of the two substances but not the other one (quit smoking tobacco but keep smoking cannabis or vice versa), the use of motivational interviewing is important and, in general, the use of all the communication strategies that make the agreement between users and professionals easier on therapeutic purposes. Regarding pharmacological treatment, this is well established for nicotine addiction (nicotine replacement therapy, bupropion or varenicline) but in the case of cannabis no medicines have shown consistent effectiveness. Studies on the effective medicines for quitting combined consumption are necessary.

### Key ideas

- > A combined treatment of tobacco and cannabis, simultaneous or sequential, is recommended.
- > There is evidence that the dual abstinence (tobacco-cannabis) leads to better long term abstinence results.
- > A personalized treatment is recommended, taking into account all the variables that contribute to the maintenance of tobacco and cannabis consumption.
- > In order to quit the combined consumption, psychological treatment is effective but studies are necessary in order to recommend effective medicines.
- > Importance of motivational interviewing since it is common that the consumer wants to quit the consumption of a substance but not of the other.



## Proposals for action

- >It is fundamental to obtain an agreement between users and professionals on therapeutic purposes, considered that even if the dual tobacco-cannabis abstinence is recommended, often the patient wants to quit the consumption of a substance but not the other.
- >Studies on effective medicines for quitting the combined consumption are necessary. Some studies could open interesting working lines with naltrexone, n-acetylcysteine, gabapentin and cannabinoid agonists.

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