

*The Impact of  
Cannabis use  
liberalisation  
on the  
workplace*

**Webinar**  
2 March 2022



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White Paper: published 30 March 2021



Consultation/Study



ACT No. LXVI of 2021, Authority on the Responsible Use of Cannabis,  
approved by Parliament on the 14 December 2021



# Research

- note of the then legislative framework regulating cannabis use
- reliable sources suggesting existing cannabis use in Malta in comparison to other countries
- addresses the question on what the expected impacts at the workplace resulting from this liberalisation would be based on the experiences of other countries
- investigates whether there exist any reliable tests to detect cannabis use which are both reliable and cost effective to be used by employers

# Research

## The Study Area

- the secondary research used for this study involved both Malta's and other countries' data previously collected by other researchers, which data may not have been necessarily collected for the purpose of a similar research.
- the non-local data was important and valuable to make up for the lack of local data and studies on cannabis use trends as well as implications at the workplace



# Research

## Validity and Reliability

- as much as possible the secondary data was collected from reliable sources or from studies which were referenced in other studies.
- the data was evaluated on the data gathering exercises used and how it was analysed and presented to ascertain its reliability and validity.
- any potential flaws in the secondary data are reported in the relevant section

# Avoiding the issues

- **Liberalisation:** Decriminalisation vs Legalisation

Question: “Why has the word liberalisation been chosen? This is not legal terminology used in Europe and I am curious why such terminology was adopted for this study.”

- **Non-Medical** vs Recreational use



# Research Questions

1. Identify **cannabis use trends in Malta** and compare them to those of other countries.
2. Compile the **expected implications listed in the reactions to the White Paper**, particularly those from health and employment related stake holders.
3. Explain the known **short- and long-term impacts of marijuana use**.
4. Indicate if there are **any reliable tests** which identify cannabis intoxication at a particular point in time.

# Research Questions

5. Challenge whether Malta's available data on cannabis use, particularly among the work force, is sufficient for evidence-based decisions and future studies on liberalisation implications.

6. **Compare and analyse trends in different jurisdictions where cannabis use has been liberalised** to those where it is still prohibited or partially prohibited to assess whether liberalisation leads to increased consumption.

7. Deduce whether the explained cannabis use short- or long-term impact or both **may have an impact on the workplace.**

8. **Recommend measures** to be taken by both the authorities and employers to mitigate the identified impacts, if any.



# Around Us



- Most used psychoactive substance worldwide
- **192 million people** around the world between the ages 15 to 64 made use of cannabis not for medical purposes (2018 estimate)
- Canada, Uruguay and 11 out of 50 states making up the USA have classified the manufacturing and sale of cannabis products as legal
- Georgia and South Africa have legalised the possession but not the sale
- Other countries around the world have decriminalised possession or use for non-medical purposes

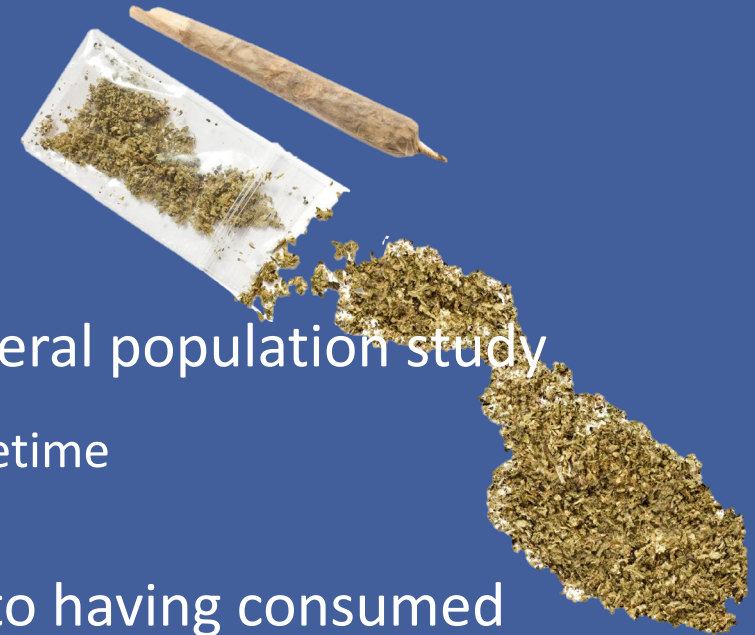
# Medical Cannabis

- In Malta - Medical cannabis was legalised, for limited medical conditions, in 2018
- Doctors can prescribe medical marijuana to individuals suffering from side effects of chemotherapy, spasticity in multiple sclerosis and chronic pain.
- Media reports - when requesting prescribed medical cannabis, the patients are asked to rescind their driving licence by requesting the police to revoke it.
- SPH claims that this is in line with Articles 34 and 45A of the Driving Licences Regulation. ReLeaf not the case when patients are prescribed other psychotropic drugs

# Cannabis Trends in Malta

- Official statistics, reported in 2020 still rely on a 2013\* general population study (MCR, 2019)
  - 4.3% of those aged 18-65 years had used cannabis during their lifetime
- Between 2013 and 2019 the incidence of those admitting to having consumed cannabis in their lifetime doubled. (2015 amendments?)
- MaltaToday survey 2019 (Sansone, 2019)
  - 9.3% of those interviewed answered that they had made use of cannabis
  - 32,000 individuals
- Government study 2020 (Cilia, 2020)
  - 40,000 individuals had used marijuana on at least one occasion in Malta

\* Data collected in 2011



# Cannabis Trends in Malta



	2011	2015	2019
Lifetime use of cannabis	9.8	12.6	11.5
Cannabis use during the last 12 months	7.8	10.4	9.4
Cannabis use during the last 30 days	4.5	5.4	4.7
Cannabis use at the age of 13 or younger	2.8	2.7	2.1

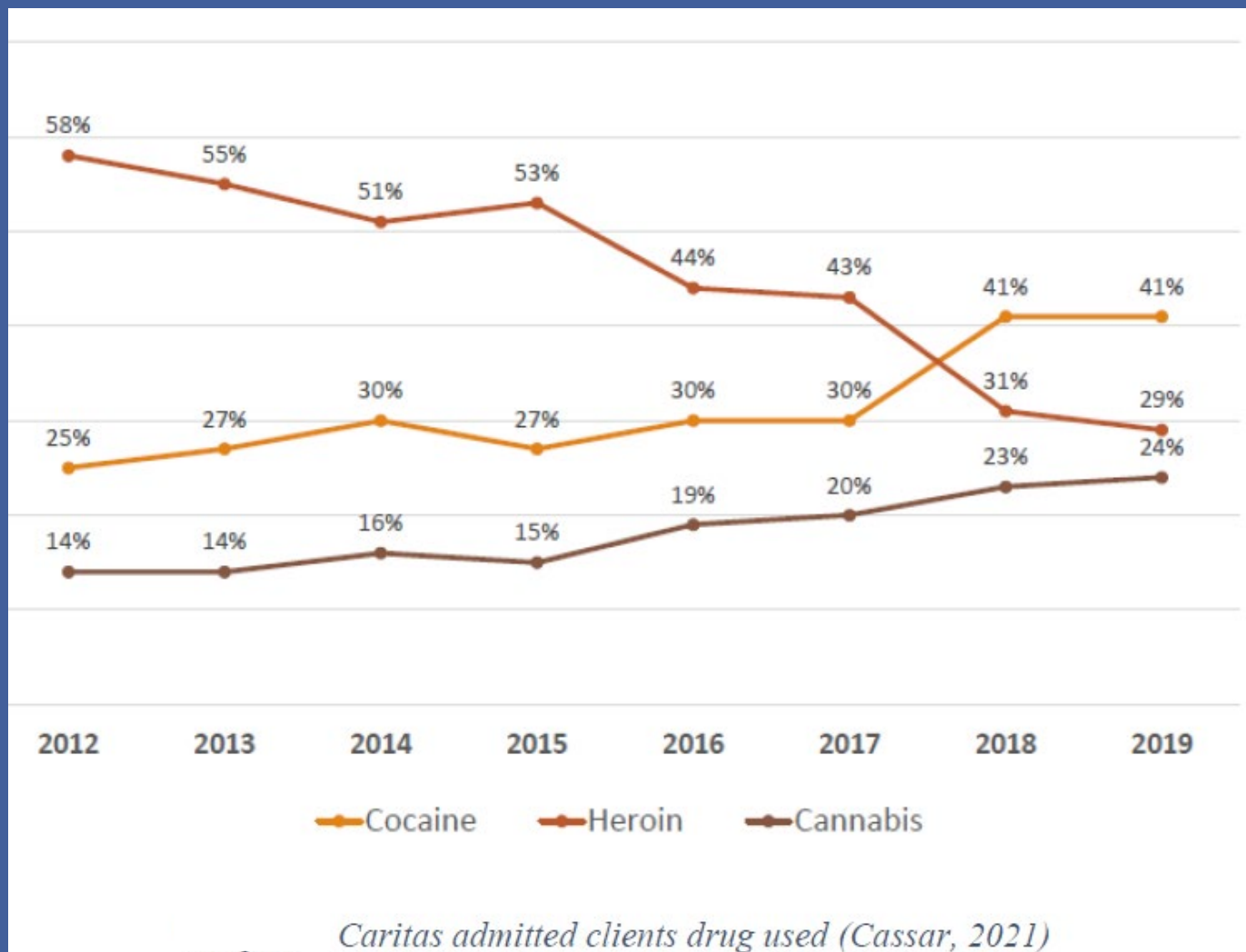
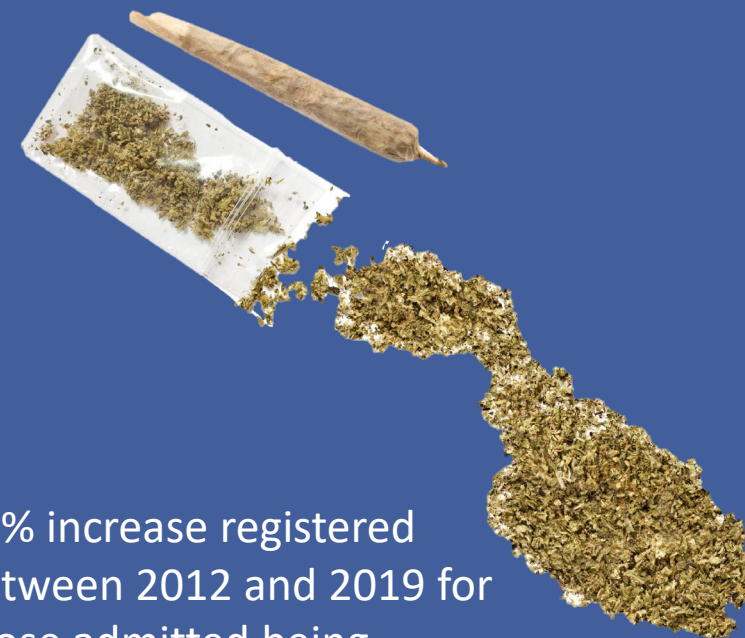
*Cannabis consumption in Maltese students aged 15 to 16 years (ESPAD, 2020, 1)*

# Cannabis Trends in Malta

- Study among University students: reported increase in use of substances pre and during Covid-19 pandemic (Borg, 2021)
  - Cannabis 46.9%
  - Cigarettes 39.7%
  - Alcohol 29.9%
- KSU Research: 967 respondents mostly 17 to 19 year old (KSU, 2021, 1)
  - 67% made use of drugs for non-medical purposes
  - 98% of them tried cannabis
  - 50% acknowledged that legalisation would give rise to consumption



# Cannabis Trends in Malta



- 71% increase registered between 2012 and 2019 for those admitted being cannabis users
- surge followed the decriminalisation of cannabis possession of under 3.5 grammes.
- although indicative, no proof of association between the two was found.

# Cannabis Trends in Malta

- The Maltese statistics may be understated, resulting from a social desirability bias, since where sensitive issues are associated with bad or undesirable behaviour, they end up under-reported
- This also applies for those statistics reported in this study which hail from countries where cannabis use is illegal.



# Malta's Data

- existing data, despite its limitations, indicates that cannabis **consumption trend in Malta was on the increase** despite the drug being illegal.
- available data of consumption among the adult population is **only for Maltese nationals**
- **excludes foreigners living in Malta** be it EU and Third Country Nationals (TCNs) most of which not only live in Malta but also form part of the Maltese workforce.



# Malta's Data

	Users	Workers	Potential
	2019	2019	Users
Italy	20.9%	10,393	2,172
United Kingdom	13.4%	5,496	736
Bulgaria	10.3%	2,605	268
Philippines	1.2%	5,298	63
Serbia*	3.4%	4,644	157
India	2.3%	4,337	99

\*2014 data

*Assessing the potential cannabis users within the foreign workforce in Malta (EMCDDA, 2020, 3) (2019 Drug Survey shows drug use prevalence rate falls to 2.05%, 2021) (EMCDDA, 2014) (Acharjee, 2020)*

Estimated that the top 3 EU and top 3 TCNs represented countries in Malta's workforce contribute a total of just under 3,500 workers who potentially use cannabis or 10.6% of the workforce hailing from those countries.

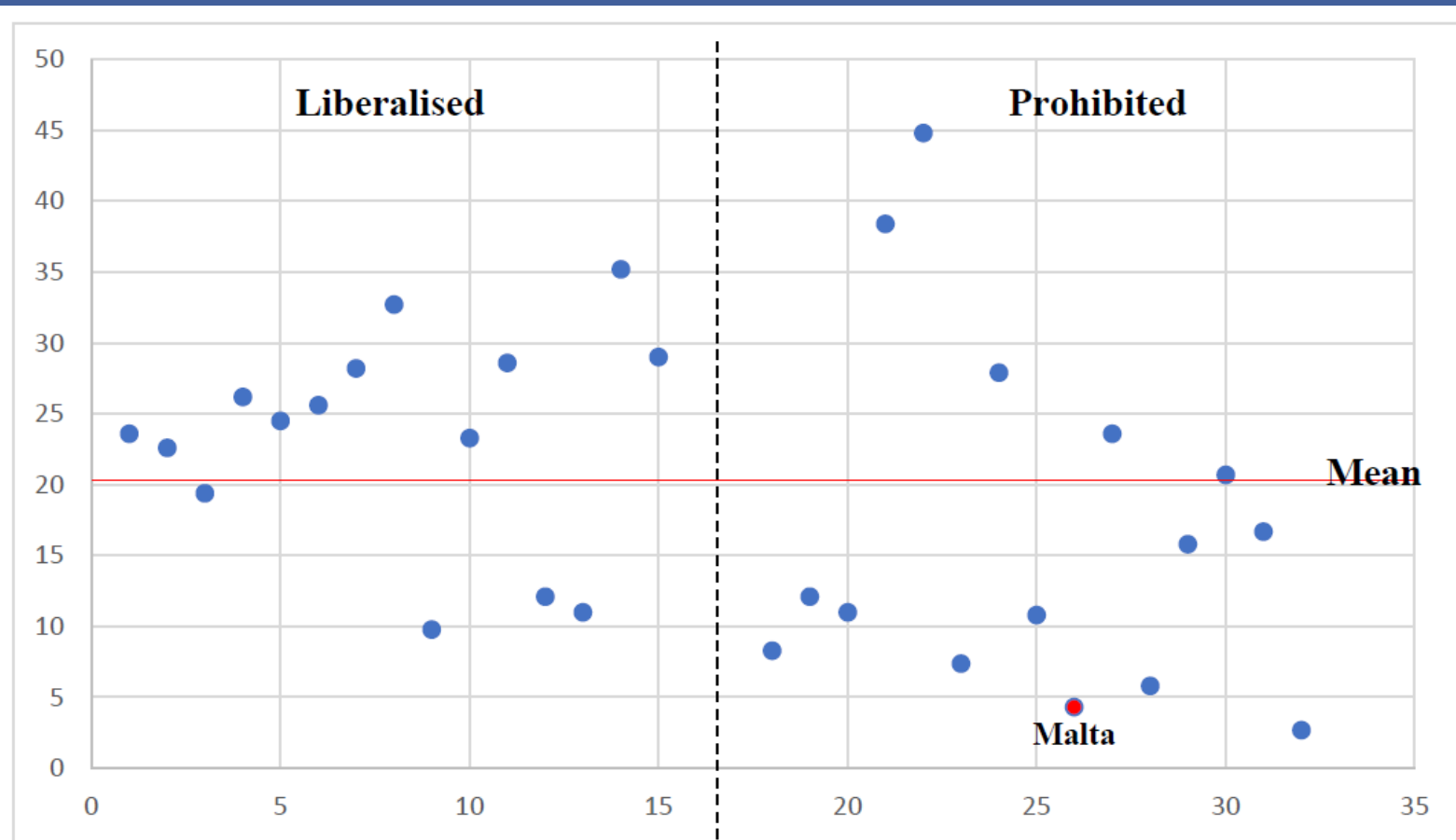
# Reactions

- Employers representatives
  - more accurate **studies and impact assessments** should be carried out
  - **no consultation** with stake holders before the paper's drafting
  - **failed to address the employment** related implications
  - need of **clear occupational health and safety guidelines**
- OASI Foundation, Caritas and the Malta Psychiatry Association:
  - this may lead to an **increase in dependency and consumption patterns**
  - questioned how people will **be tested** if suspected to be driving under cannabis influence
  - asked after a country-specific study about the **social impact** of the proposals

# Reactions

- Student Organisations
  - lacks reference to **scientific research** as well as journals
- Medical Organisations
  - drafted **without consultation** with the social and health professionals
  - **damaging to young brains** with the possibility of addiction
  - cautioned that legalisation **leads to an increase in the drug's overall consumption**
  - fails to address the **expected increase in accidents** which have been registered elsewhere

# Legalisation leads to an increase in consumption?



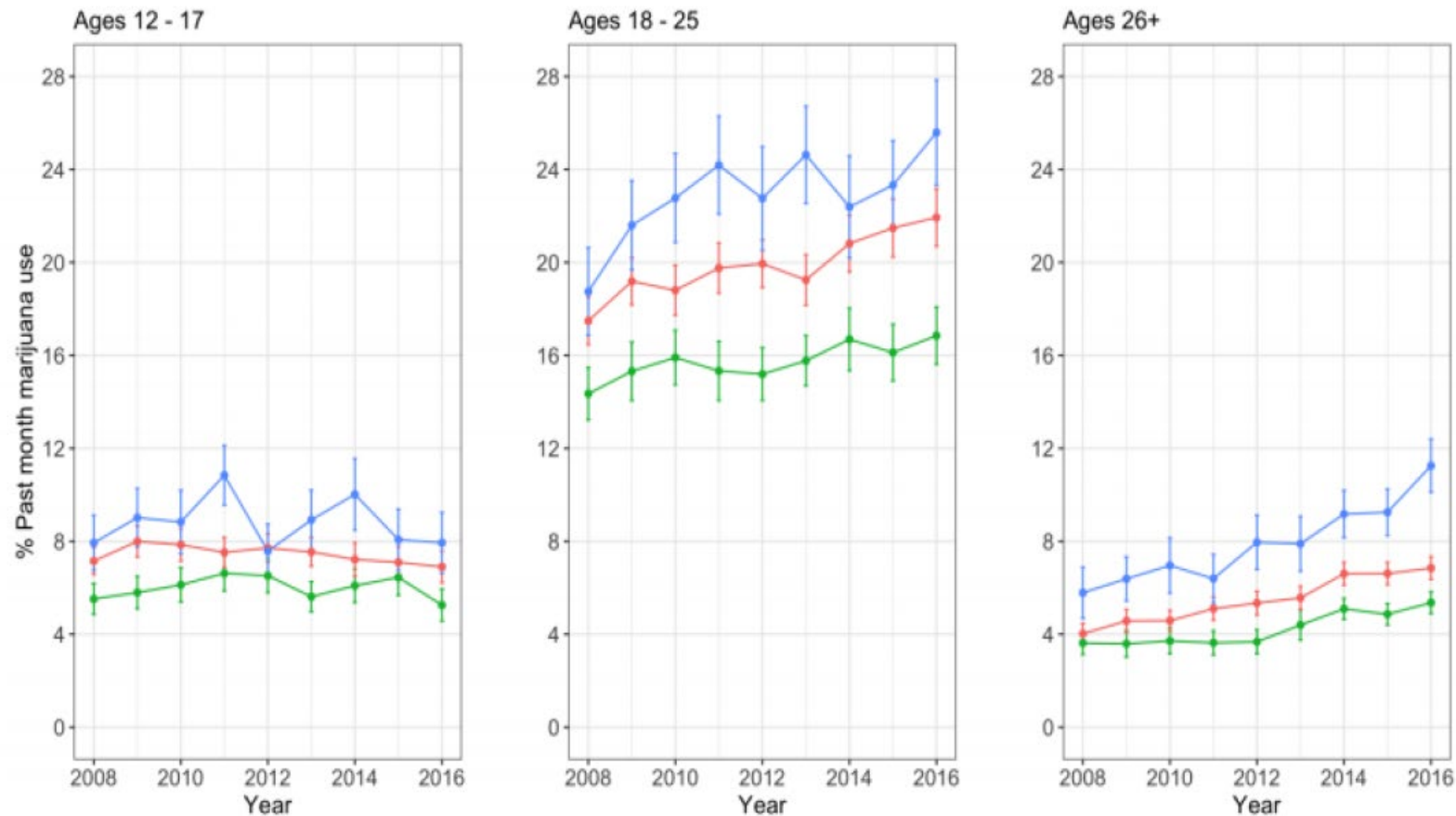
*Percentage cannabis users, in the 12 months before survey, by country grouped between countries with prohibitive use of cannabis and liberalised use.*

Data published in the last European Drug Report 2020

- the mean of those countries with a liberal approach was far higher than those with a prohibitive approach
- the average lifetime use in those countries with a liberalised approach was by 23.5% of the respondents dropping to 16.7% in those countries with a prohibitive approach.

Since Malta's data published in the Drug Country Report was for the year 2013, for the purpose of the exercise the country was included in the group with a prohibitive approach.

# Legalisation leads to an increase in consumption?



Graph 5 - Prevalence of Past Month Cannabis Use by Age Group and State NMML Status, (Cerdá et al., 2020)

Indicates the incidence of marijuana use in those states that:

- Green no MML & NMML
- Red MML only
- Blue NMML

NMML Non-Medical Marijuana Legislation

MML Medical Marijuana Legislation

# Legalisation leads to an increase in consumption?

	2018	2019	2020	Difference	
				2019-2018	2020-2018
Alberta	23%	26%	28%	3%	5%
British Columbia	26%	29%	29%	3%	3%
Manitoba	22%	21%	28%	-1%	6%
New Brunswick	17%	30%	28%	13%	11%
Newfoundland and Labrador	24%	28%	29%	4%	5%
Nova Scotia	28%	31%	30%	3%	2%
Ontario	24%	25%	29%	1%	5%
Prince Edward Island	26%	25%	28%	-1%	2%
Quebec	16%	19%	21%	3%	5%
Saskatchewan	19%	25%	27%	6%	8%
Territories	39%	33%	37%	-6%	-2%
<b>Canada - TOTAL</b>	<b>22%</b>	<b>25%</b>	<b>27%</b>	<b>3%</b>	<b>5%</b>

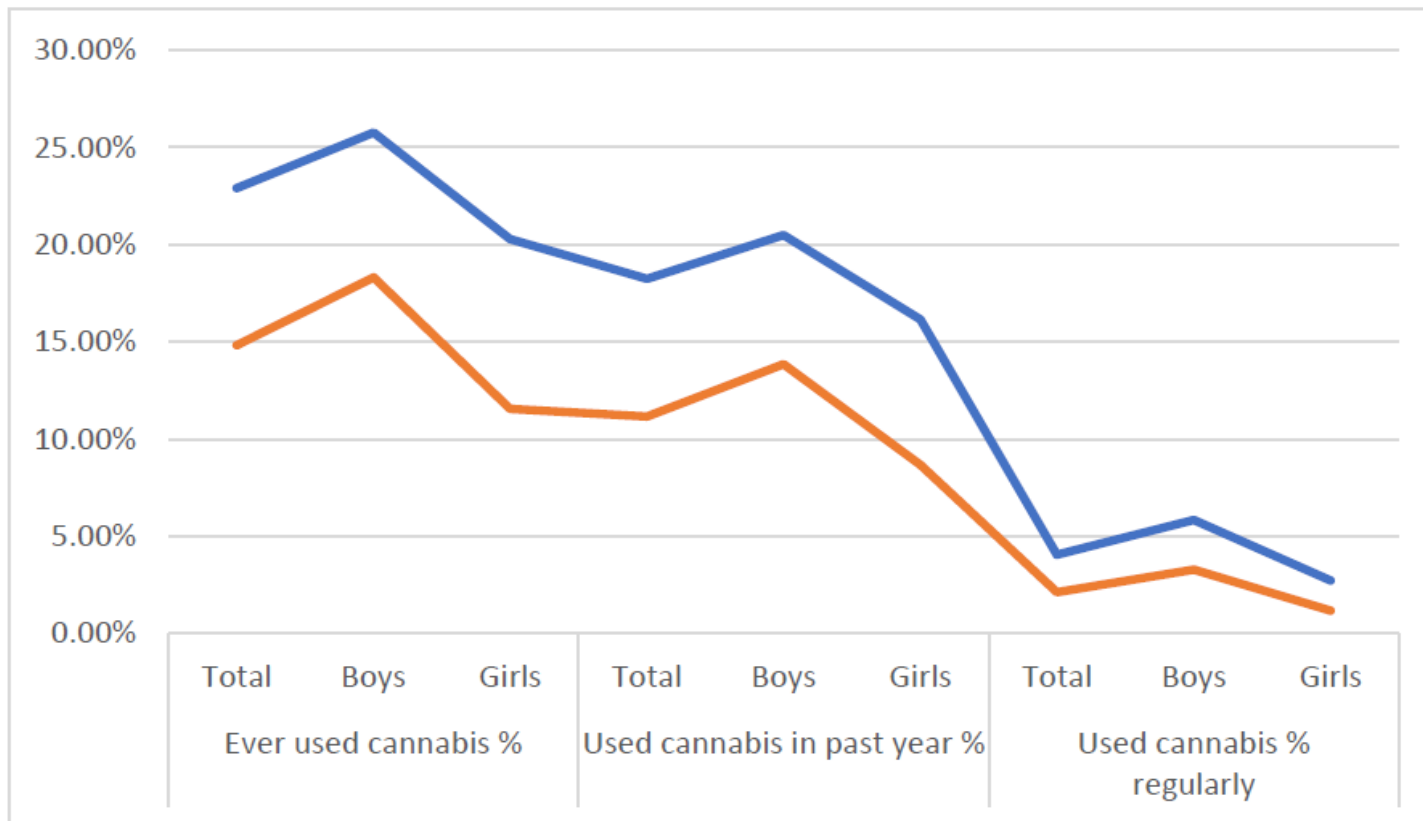
Trends among Canadians who are 16 years and over since the legalisation of the drug in 2018:

- net increase of 3% in the first year following legalisation and
- another 2% increase in 2020

resultant increase was registered among both sexes and age groups

*Cannabis use over a 12-month period trends in Canada post legalisation (Canada Cannabis Survey, 2020)*

# Legalisation leads to an increase in consumption?

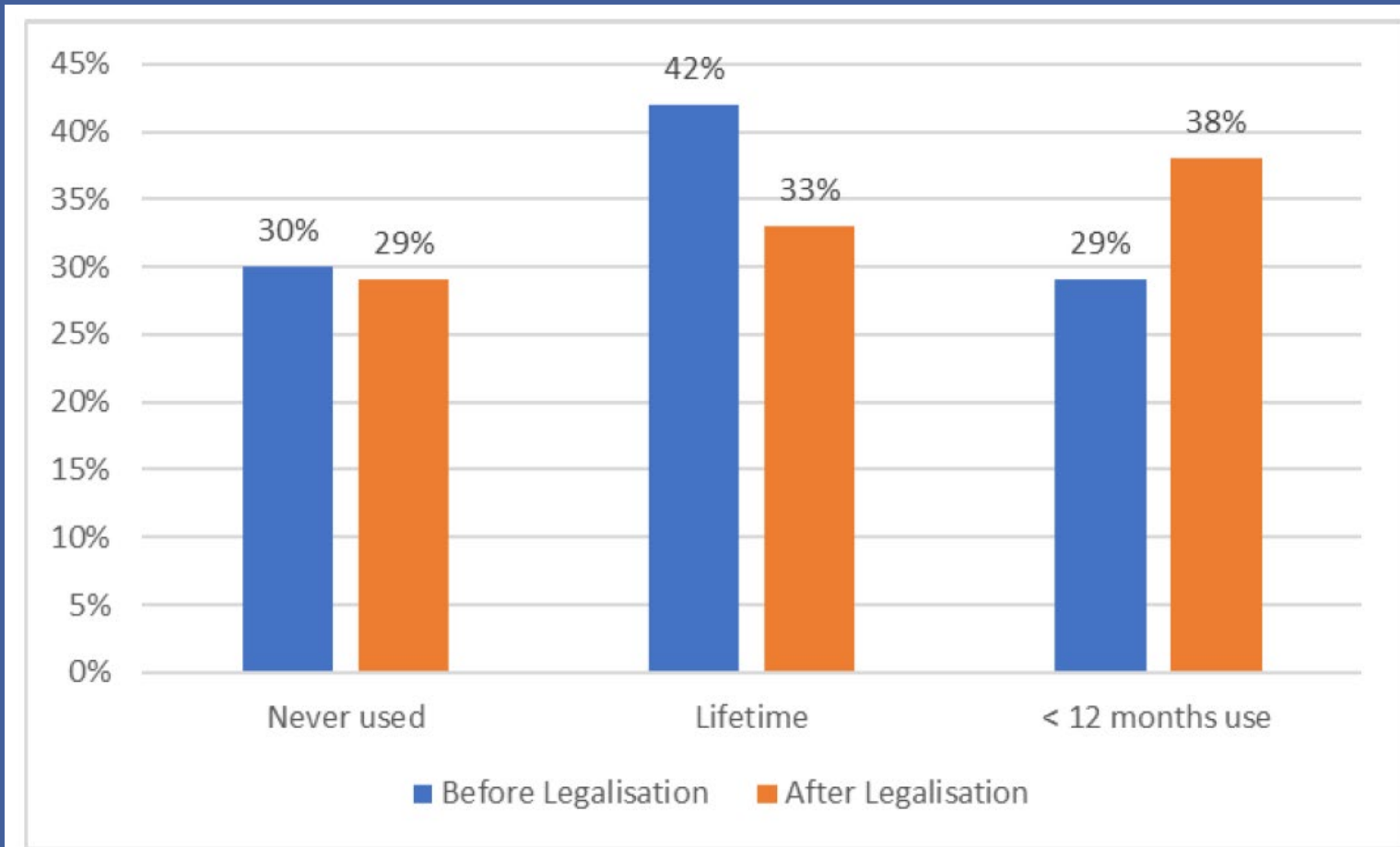


Comparison of the marijuana consumption patterns among 15-year-olds in 38 countries aggregated according to whether cannabis was liberalised (blue line) or fully prohibited (orange line) in their country.

The Health Behaviour in School-Aged Children (HBSC) survey:

- evaluated the data of 172,894 youngsters aged 15
- carried out in 38 countries in Europe and North America.
- study concluded that higher levels of marijuana use among adolescents is associated with the liberalisation of cannabis through decriminalisation and partial prohibition

# Legalisation leads to an increase in consumption?



*Cannabis use among Canadian workforce pre and post liberalisation (Carnide, 2020)*

Since the legalisation of non-medical Cannabis in 2018, the IWH has been conducting a yearly survey among the country's workforce to evaluate the impact of the relatively new legislation on the employees:

- while legalisation marginally decreased the percentage of non-users, those who had previously made use of cannabis in their lifetime returned to using it post legalisation

IWH - Institute for Work & Health, Canada





# Cannabis

- Principal cannabinoids
  - Cannabidiol (CBD) and
  - Tetrahydrocannabinol (THC)
- Tetrahydrocannabinol
  - foremost psychoactive component in cannabis (WHO, 2019)
  - affects mental processes, such as cognition or effect, when taken or administered (WHO, n.d.)
  - psychoactive effects of THC may be altered by cannabinoids such as CBD. (Mechoulam & Hanus, 2012)



# Cannabis

- in Europe, the THC content in herbal cannabis ranged between 9 to 12% as opposed to 13 to 24% in resin (EMCDDA, 3, 2020)
- many marijuana users do not become addicted to the drug, but research suggests an incidence of around 3% of users develop a cannabis use disorder (Hasin et al., 2015)
- cannabis use early in life is firmly linked to dependence and abuse of other drugs (Agrawal, Neale, Prescott and Kendler, 2004)



# Cannabis

- Various research shows that frequent, intense cannabis consumption during adolescence is linked to more serious and enduring negative outcomes when compared to consumption during adulthood (WHO, 2016).
- positive link between the risk of mental illness and the degree of cannabis use (Marconi et al., 2016)
- impaired cognitive functions on a number of levels, ranging from simple motor coordination to other complex ones, are increased through THC intoxication (Moore et al., 2007)



# Cannabis

- Crean, Crane and Mason (2011)
  - use brings about acute effects such as **hampered attention and disordered information processing**
  - only after a month of abstinence will these functions show signs of recovery
  - with regular and heavy use, some impairments could occur which would not be resolved with abstinence
  - even more if the heavy use took place during adolescence resulting in **some executive functions not maturing successfully.**
  - acute cannabis use may result in **impaired inhibition, increased impulsiveness and compromise of working memory** (this may be the case in occasional use too)



# Cannabis

- Heavy use in adolescence
  - lower education levels,
  - lesser earning capabilities,
  - a higher dependence on welfare provisions,
  - increased chances of unemployment, and
  - reduced satisfaction in life and relationships (Fergusson and Boden, 2008)



# Cannabis

- Impairments

- can last up to ten hours depending on
  - the consumption method,
  - doses of THC
  - the individual's consumption patterns

- long periods associated with high doses of THC consumed orally

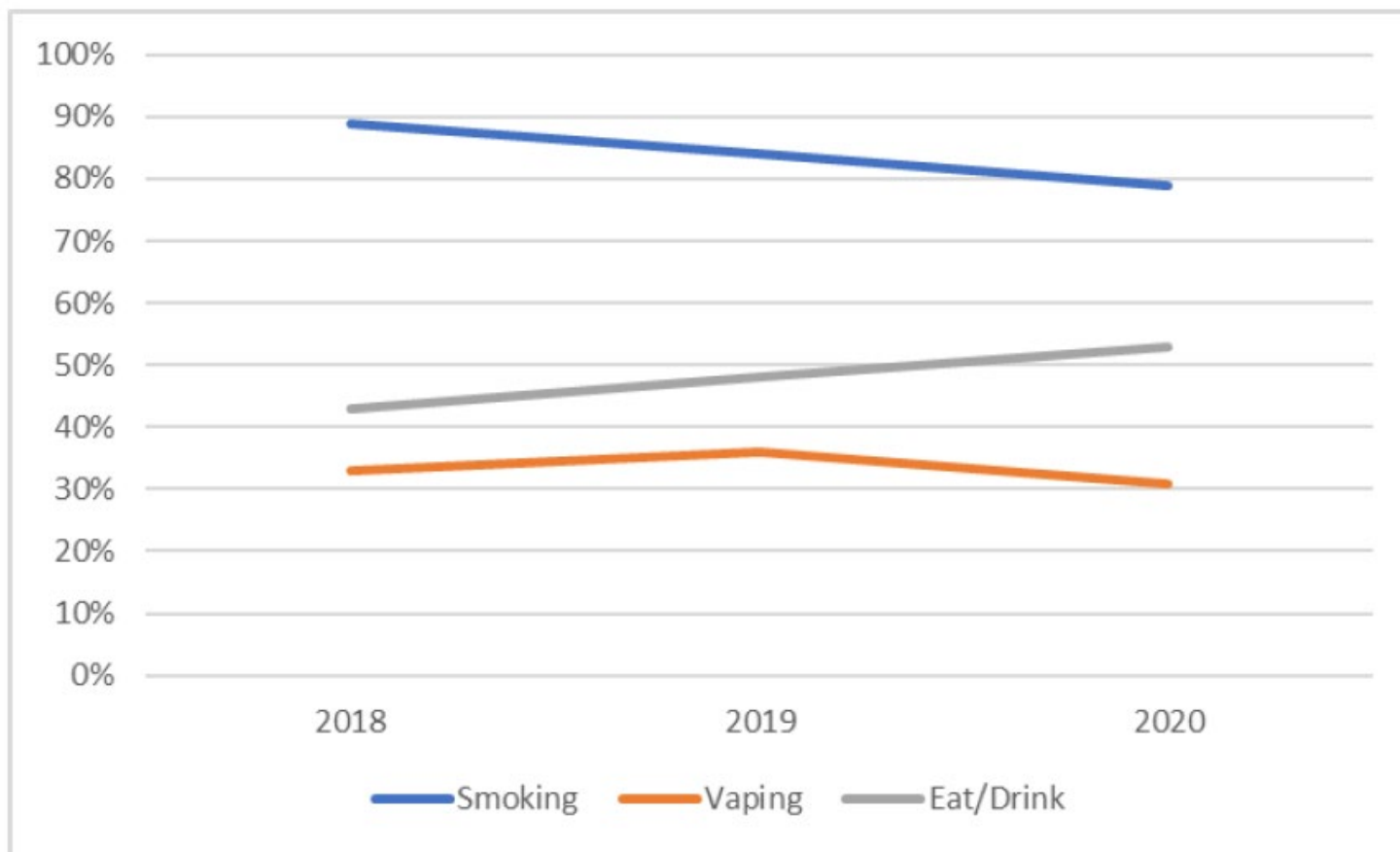
- typically 4 hours with lower, smoked or vaporised, THC doses

- much less obvious in regular marijuana users than intermittent users

(Scientists put the stopwatch on cannabis intoxication, 2021)



# Cannabis



*Canadian cannabis consumption methods (Canada Cannabis Survey, 2020)*

- smoking remained the preferred method of consuming the drug,
- 10% increase in those who ate or drank the drug
- smoking and vaping both registered a decrease in popularity.

resultant increase was registered among both sexes and age groups

# Workplace Implications

- The possible consequences can be due to both the short- and long-term impacts of marijuana use
  - risks and increased costs due to adverse events as well as decreased productivity (Phillips et al., 2015)
  - difficulty in concentrating,
  - changes in expression and thought formation,
  - reduced motor coordination skills,
  - physiological functioning such as sedation and tiredness, as well as psychomotor functioning
- One of the more significant injuries that could be experienced due to cannabis use is injury or fatality while driving (WHO, 2016)





# Workplace Implications

	Task performance	OCBi	OCBo	Production deviance	Property deviance
Before-work cannabis use	-3.42	-0.16	-2.75	5.14	6.39
During-work cannabis use	-5.35	-0.51	-2.56	6.3	11.23
After-work cannabis use	-1.6	-0.77	-1.85	1.41	0.99

----- *Simple Regression Results Using Employees' Superiors' Opinion and Marijuana Measures Relevant to the Workplace.*

- cannabis use after working hours had no impact on the employees' performance. On the other hand, negative impacts were recorded when the drug was consumed before and during work Bernerth and Walker (2020)
- association between five types of workplace performance and three chronological-based marijuana events among 281 employees who were assessed by their direct superiors

# Workplace Implications

		Respondents	Total Injury (%)	Falls (%)	Knocks & Bumps (%)	At work (%)	Not at Work (%)
15-64 years old	Cannabis Use						
	No	25,116	5.3	2.9	1.5	2.0	3.4
	Yes	3175	9.0	4.1	3.7	3.3	5.8
	Frequency of Cannabis Use						
	<Weekly use	1640	8.7	4.5	3.5	3.1	6.2
Weekly use	1535	9.3	3.7	4.0	3.5	5.3	
15-34 years old	Cannabis Use						
	No	9929	5.9	2.9	2.0	2.0	3.8
	Yes	2426	8.8	4.2	3.6	3.2	5.9
	Frequency of Cannabis Use						
	<Weekly use	1271	8.8	4.6	3.7	2.7	7.2
Weekly use	1155	8.7	3.7	3.4	3.8	4.6	
35-64 years old	Cannabis Use						
	No	15,188	4.8	2.8	1.2	1.9	3.1
	Yes	749	9.6	4.1	4.1	3.6	5.3
	Frequency of Cannabis Use						
	<Weekly use	369	8.2	4.4	2.6	4.7	2.9
Weekly use	380	11.0	3.9	5.7	2.5	7.6	

*Occurrence of injuries, not related to traffic accidents, which needed medical attention over 1 year among Spaniards aged 15-64 and association between cannabis use (Barrio et al., 2012).*

- cannabis use is linked to **an increase in frequency of non-traffic injuries** is very apparent in these results
- the authors caution against the study's limitations
- incidence is **even higher in the 35-64-year-old** set in comparison to the younger cohort.
- incidence of the **injuries at work was close to double in the 35-64-year-old** group among those who use cannabis when compared to nonusers.
- there also seems to be a **contrasting difference between the total injuries among those who make weekly use of cannabis and those who use it less frequently** in the older cohort. On the other hand, in the same cohort, those making less regular use seem to have reported a higher incidence of non-traffic injuries at the workplace.

# Workplace Implications

	Associations between cannabis use and reporting		
	Any type of incident	Minor Injuries	Accidents
No drug use	1.00	1.00	1.00
<b>Cannabis use</b>	1.34	1.17	0.91
Low levels of other risks and no drug use	1.00	1.00	1.00
<b>Low levels of other risks and cannabis</b>	1.15	1.10	0.92
High levels of other risks and no drug use	3.42	4.13	3.11
<b>High levels of other risks and cannabis</b>	4.89	8.49	3.85

*Marijuana use and its association with injuries and accidents during working hours (Wadsworth, Moss, Simpson and Smith, 2005)*

- associated the drug use with both accidents and minor injuries especially where higher risk factors existed
- measured injuries at the workplace and distinguished between those with low and high level of risk factors
- there was a connotation with the use of marijuana and those who suffered an incident in a workplace which had a high level of other risk factors. Such an association was not reported in the case of accidents.

# Workplace Implications

- Particular attention should be given in
  - safety sensitive jobs such as
    - driving of heavy vehicles and
    - use of other machinery
  - employees exposed to chemical agents, who are cannabis users, will need additional health surveillance
    - established that cannabis is linked to inflammation of the lungs thus risk being impacted further

(Gauci, 2021)

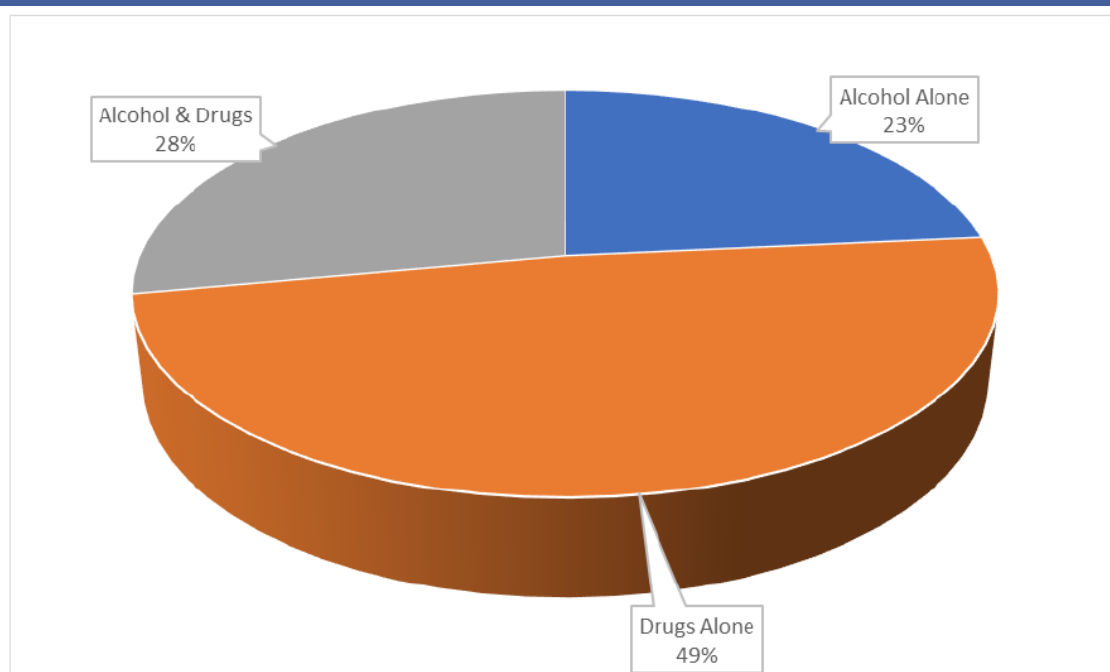
# Workplace Implications

	Traffic Accidents
No drug use	1.00
<b>Cannabis use</b>	<b>3.01</b>
Low levels of other risks and no drug use	1.00
<b>Low levels of other risks and cannabis</b>	<b>3.24</b>
High levels of other risks and no drug use	3.03
<b>High levels of other risks and cannabis</b>	<b>6.06</b>

*Link between cannabis consumption and traffic accidents during working hours (Wadsworth, Moss, Simpson and Smith, 2005)*

- marijuana consumption was linked with all road traffic accidents
- cannabis users with both high and low levels of other risk factors reported a higher incidence of traffic accidents during working hours
- those with a high other risk factor had a significant incidence of work-related road traffic accident during the 12 months before being questioned.

# Workplace Implications



*Extrapolated data showing the prevalence of drugs, alcohol or both in car accidents victims in Canada in 2014.*

- Canada in 2018 using data from the Fatality Database of 2014 found that 19% of all the drivers who lost their lives in a traffic accident tested positive for Cannabis.
- incidence was higher than that of alcohol alone fatalities which stood at 13%
- when non-alcohol or non-drug related fatalities data presented in the report is removed the highest incidence of fatalities are very prevalent among the drug alone accidents.

(Solomon, Ellis and Zheng, 2018)

# Identifying Impairments

- Complicated to determine how much and when an employee's performance has been impaired by cannabis consumption
  - difficult for an employer to set a legal threshold
- Easier to identify consumption by using a drug test

(Howard and Osborne, 2020)



# Conflicts

- three situations when an employer might feel the need to test an individual for drug impairment.
  - pre-employment screening,
  - post-incident or for reasonable grounds
  - part of a safety sensitive workplace's random testing policy (Ontario Human Rights Commission, 2016)
- in the absence of reliable methods for assessing impairment, organisations will encounter issues taking disciplinary measures in such circumstances (Human Resources Professionals Association for employers, n.d.)



# Detecting Cannabis

- Hound Labs Inc. first ultra-sensitive technology Cannabis Breathalyser
  - different sources quoted a onetime cost of \$5,000 for each device and \$20 for each test (GovTech, 2019)
- The UK government legislated for roadside drug testing using saliva in 2015
  - penalties for offenders are similar to those caught drink driving
  - test is known for detecting drug consumption within hours and not days (UKDrugTesting, 2021)
  - the cost for each test is around €42 per test (D.tec International Ltd., 2021)

# Conclusions

- A leap from dark to darker?

- official data is obsolete, at least 10 years old
- data on current actual users of non-medical cannabis is missing except for that among students who are 15 and 16 years old
- excludes the foreigners who moved to Malta for employment purposes and who contribute to 30% of the country's workforce
- impact on future studies
- census - missed opportunity

- Increased use?

- ESPAD statistics show a noticeable increased consumption among young teenagers
- Malta Today survey shows a 100% increase in those who made use of cannabis at least once during their lifetime over a ten-year span
- studies seem to indicate that liberalisation will bring about an increased use of non-medical cannabis among all ages, being a member of tomorrow's or today's workforce

# Conclusions

## Workplace impact?

- Long Term
  - use pattern among our younger generation, tomorrow's workforce, is on the increase
  - liberalisation will result in a higher incidence of consumption among this cohort, which is more prone to develop a psychosis at an older age, leading to a higher incidence of mental health issues among tomorrow's workforce resulting in increased absence and decreased productivity
  - may also result in a smaller local workforce due to the attainment of lower education levels and more reliance on welfare provisions, rather than the high achievers the country grew accustomed to
- Short Term
  - increased incidence of injuries and accidents at the workplace particularly among those workers who are already exposed to other occupational risks
  - risks seem to be even higher among those workers whose job duties include driving
  - increase in reduction of task performance and production as well as a higher incidence of property deviance
  - current legislation does not indicate what level of THC in body fluids is considered as high enough to be considered as at risk of impairment and thus risking harm to self or others

# Recommendations

- Studies

- get hold of today's real picture
- carry out the much-requested social impact assessment which should include the anticipated impact on different workplaces
- help those studying the liberalisation impact post enactment of the recommendations

- Legal Definition of Impairment

- UK model of roadside drug testing should be copied to give “impairment” a clear legal meaning?
- also be applied for testing at the place of work

# Recommendations

- Medical use vs Non-Medical use

- employers need to have separate regulatory streams for medical and non-medical use
- help employers to be in better position to verify when accommodation is needed for medical purposes

- Guidelines

- two sets of cannabis use guidelines - medical and non-medical use to assist employers handle cannabis at the workplace

- Risk Assessment

- A workplace related risk assessment should be carried out by different employers in different industries
- help assist the employer to draft a more workplace specific substance abuse policy



# Recommendations

- Workplace Policies

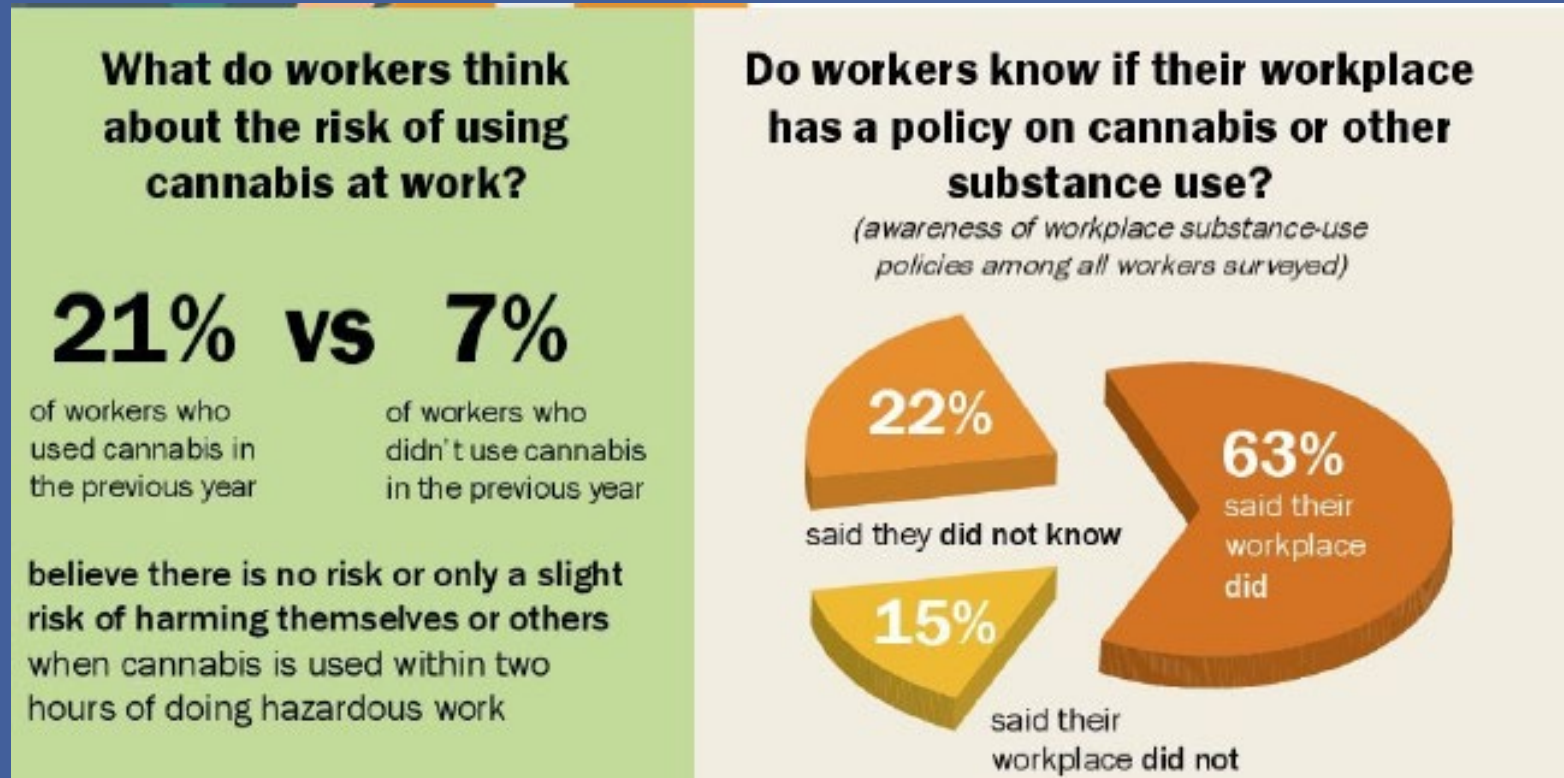
- every workplace should have a clear substance abuse policy that includes the definition of “impairment” according to the risk environment and duties at the workplace
- sharp contrast between non-medical and medical use of cannabis
- spell out when and where the employer will accommodate and what possible disciplinary action may be taken
- if the employer does not opt for zero tolerance that the policy establishes the minimum time of consumption before working hours which should also vary depending on consumption method

- Awareness and Training

- should have their own specific awareness sessions to all employees to make them aware of the organisation’s specific policies and procedures on both medical and non-medical use of cannabis and the consequential possible impairment at the workplace
- train their managers and supervisors on how to identify, handle and report possible impairments as well as to be able to answer employees’ questions on the subject

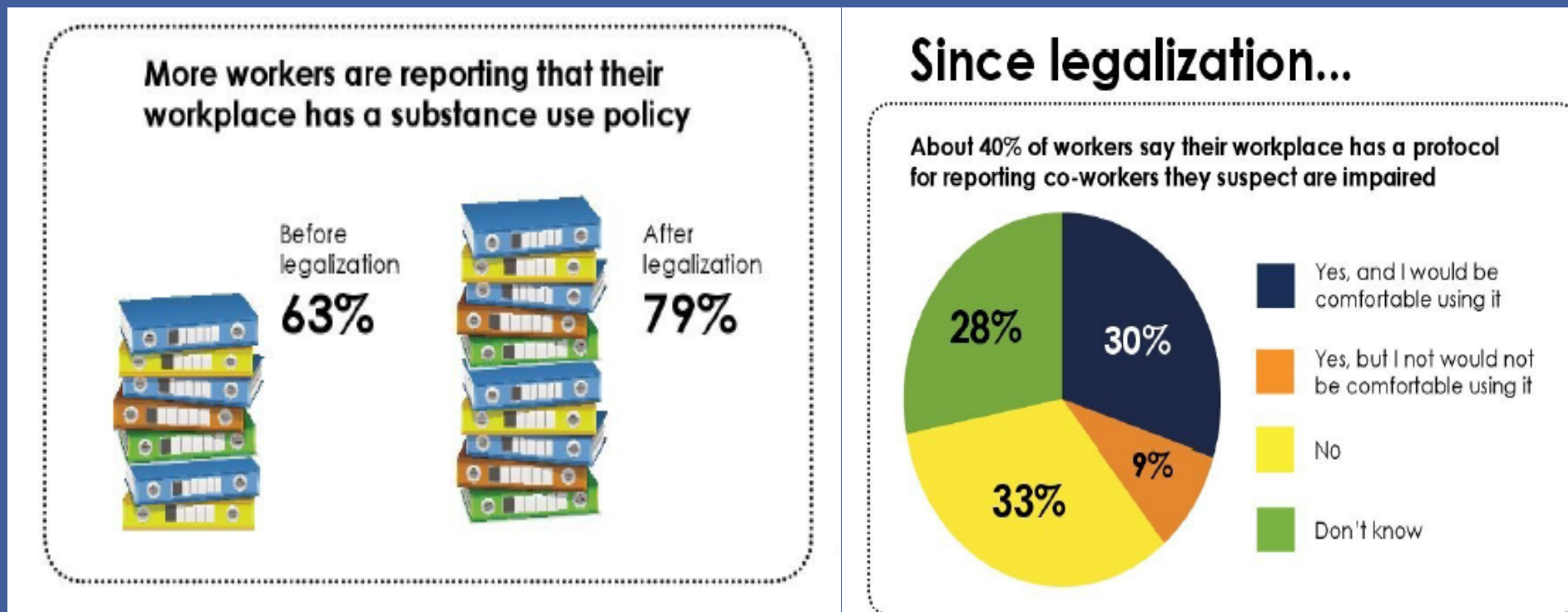


# Post Legalisation in Canada



Part of an infographic published by the IWH explaining the findings of the first survey carried out with employees post legalising of non-medical cannabis (Institute for Work & Health, 2021)

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# Recommendations

- Testing

- TCH levels testing in different body fluids and breath seems to be quite advanced
- an onus on employers to regularly revisit their substance abuse policies especially if this includes testing procedures
- in the absence of a legislative definition of impairment, employers must follow the latest developments in testing technology and jurisprudence



Question Time



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**Webinar**  
2 March 2022



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