

Joint symposium on mental health and addiction

A discussion, exchange and sharing of
perspectives

November 2018

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Opinions expressed in this report do not necessarily represent the views of all participants at the event, the Academy of Medical Sciences, or its Fellows.

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Preface

This one-day symposium, held jointly by the UK Academy of Sciences and the Académie Nationale de Médecine¹ in Paris, France, focused on the epidemiology and impact of both alcohol and cannabis addiction in young people in the UK and France.

Young people were defined according to the United Nations approach as between the ages of 15 and 24 years. The symposium also provided an opportunity to discuss the public health and legal frameworks designed to help prevent or mitigate addictions, and the responses of healthcare systems in both countries.

An overarching ambition of the symposium was to promote discussions to identify areas where lessons from one country may be applicable to the other, with the ultimate desire of highlighting ways in which addictions might be better treated in both countries.

The following report summarises the presentations and discussions held at the meeting, and outlines some of the key themes to emerge. Notably, the report also presents the key evidence gaps and opportunities for future research that delegates agreed should be prioritised in order to improve responses to addiction in both the UK and France.

It reflects the views expressed by participants at the meeting and does not necessarily represent the views of all participants, all members of the Steering Committee, the Academy of Medical Sciences or the Académie Nationale de Médecine.

The Academy of Medical Sciences and the Académie Nationale de Médecine are most grateful to the steering committee for their work towards the development of the agenda, and on the day itself. Details of the steering committee members are provided in **Annex 1**.

¹ <http://www.academie-medecine.fr/>

Executive summary

In November 2018, the Academy of Medical Sciences and Académie Nationale de Médecine organised a joint symposium to explore the trends in alcohol and cannabis use in young people in the UK and France, discuss the public health and criminal justice responses, and explore the differing approaches to addiction prevention and management in the two countries.²

The participant discussions were framed around the finding that alcohol use is among the leading causes of mortality and disability in young people, and that there are growing concerns about young people's use of cannabis, particularly its impact on mental health and behaviour. Although there are encouraging signs that alcohol and cannabis use in young people is falling, their use is still associated with considerable immediate risk of death, injury and ill-health, as well as an increased risk of mental and physical health problems in later life.

² Academy of Medical Sciences (2018). *Joint symposium on mental health and addiction: A discussion, exchange and sharing of perspectives*. <https://acmedsci.ac.uk/policy/policy-projects/joint-symposium-on-mental-health-and-addiction-a-discussion-exchange-and-sharing-of-perspectives>

This joint symposium provided an opportunity for researchers from the UK and France to discuss and compare alcohol and cannabis use in the countries, and national responses to it. The meeting started with a keynote lecture to outline the European legal and human rights context to addictions, which was followed by three main sessions, and a final discussion session. Each of the main sessions followed the same format of two plenary presentations – one to provide a UK perspective, and one a French perspective - a panel session including two additional presenters, and a wider audience discussion. A list of speakers, panel members, and a full agenda is provided in **Annex 2**.

Through the presentations and wider discussions, a number of key themes and evidence gaps were identified that delegates agreed could shape future research to improve the provision of services, and mitigate the negative impacts of alcohol and cannabis use. These evidence gaps and methodological needs – in terms of neurobiological understanding, service design and advocacy - have been summarised as follows.

Neurobiological understanding

- A good deal is known about the potential for damage to the fetal brain if a women takes alcohol during pregnancy. However, is there any damage to the fetus/children when the biological father is a heavy drinker?
- What is the impact of cannabis use on the fetus during pregnancy?
- What is the short-term neurobiological impact of substance use on young people's developing brains? What are the long-term consequences?

Service design

- How can services be better designed to take account of multiple addictions and additional morbidities (e.g. mental health)?
- What is the optimal design of services specifically directed to young people (aged 15 – 24 years)?
- What is the role of early screening?
- How can uptake of services be increased?
- What can international comparisons tell us about optimal service design?
- How can drug use in prisons (and other defined communities such as hospitals, children's homes, and the military) be managed and what addiction services should be provided?

Advocacy

- How can addiction/substance use disorders be made a higher health and social priority?
- We have almost all the information needed on the harms of consuming alcohol to inform public health strategy - how can implementation of evidence-based alcohol harm-reduction policies be enhanced?
- How can we develop similar public health policies in relation to cannabis consumption?

Methodological needs

- Alcohol consumption is rather easily measured – in terms of intake by 'units' which translate easily into glass size of various drinks and intoxication by blood alcohol measurement. How can 'exposure' to cannabis be assessed quantitatively, in a similar way that can be done with alcohol units?
- It is hard to conceive of ethical randomised controlled trials of policy changes, so how can 'natural experiments' such as national policy changes be exploited to generate evidence to guide policy-making?

Introduction

Alcohol and cannabis use by young people is a substantial public health concern in both the UK and France. As well as the impacts of acute intoxication, regular use can lead to a state of dependence with long-term consequences for health and social functioning.

Alcohol use is one of the leading factors contributing to premature mortality in young people, and alcohol use disorder is associated with a wide range of health impacts in later life, including mental health problems. Similarly, there are growing concerns about the acute effects of cannabis intoxication and, in particular, its impact on mental health.

Comparisons between cannabis and alcohol are informative because, despite many similarities in their impacts, they are subject to different legal restrictions. As well as these comparisons, the Academy of Medical Sciences and Académie Nationale de Médecine symposium explored trends in alcohol and cannabis use in the UK and France, public health and criminal justice responses, and differing approaches to addiction prevention and management in the two countries.

To do so, the meeting began with a keynote lecture to outline the European legal and human rights context to addictions. This was followed by three main sessions, designed to explore the epidemiology and impact of addictions, the public health and legal frameworks in place to address them, and how health systems and services currently respond to the issue. Each of these main sessions followed the same format of two plenary presentations – one to provide a UK perspective, and one a French perspective - a panel session including two additional presenters, and a wider audience discussion. These sessions were then followed by a final discussion session which provided an opportunity to further explore the themes that emerged during the day and raise any outstanding areas of importance. Lastly, a networking reception was held to help facilitate greater collaboration between the two countries. A list of speakers, panel members, and a full agenda can be seen in **Annex 2**.

The European legal and human right context

To provide a context for the later discussions, Professor Hans-Jörg Albrecht, Max Planck Institute for Foreign and International Criminal Law, opened the symposium by outlining the legal frameworks governing the use and distribution of alcohol and cannabis.

He noted that the regulation of these substances can often be highly politicised, potentially leading to highly entrenched views and a resistance to evidence-based policy-making.

Professor Albrecht outlined four pillars underpinning the regulation of alcohol: youth protection (limiting access, punishing supply); public health protection (limiting advertising, education, treatment for dependence); road traffic safety; and taxation policy to influence consumption patterns.

However, the situation for cannabis is different, as production is prohibited under international law. Key legislation includes the 1961 Single Convention on Narcotic Drugs,³ which introduced strict control of distribution, and the 1988 Vienna Convention,⁴ which also prohibited possession. The European Union has also developed multiple strategies and position papers covering cannabis and other psychoactive substances.⁵

In theory, therefore, there is little room for variation in national policies on cannabis, which typically aim to restrict supply and reduce demand. In practice, European countries show significant variation in attitudes to cannabis, from strict prohibition to tolerance. Internationally, a range of countries, such as Canada, and US states have recently decriminalised cannabis, with supply managed through the public sector in Uruguay and in the private sector in US states, and a combination of the two in Canada. In addition, there are growing moves to increase access to cannabis-based products for medical purposes in several countries, including the UK.

A key factor driving more relaxed attitudes to cannabis is the enormous load current legislation imposes on police resources and the criminal justice system. There are also concerns that criminalisation of young people for cannabis possession can have significant long-term repercussions.

Professor Albrecht also identified a range of human rights arguments that touch upon the criminalisation of cannabis. One argument is that there is no logical reason why alcohol and cannabis should be governed by such contrasting legal frameworks. Some courts have judged that the special social status of alcohol justifies differential treatment. Other key issues include the right to privacy, including freedom to undertake activities in one's home without interference from the state, and liberty-based arguments, for example that state intervention is only justified when there is a risk to the health and wellbeing of others.

3 United Nations (1961). *Single Convention on Narcotic Drugs*.

<https://www.unodc.org/unodc/en/treaties/single-convention.html>

4 United Nations (1988). *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances*. https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=VI-19&chapter=6&clang=en

5 European Monitoring Centre for Drugs and Drug Addiction (2017). *Cannabis legislation in Europe: an overview*. http://www.emcdda.europa.eu/publications/adhoc/cannabis-legislation-europe_en

Epidemiology and impact of addictions to alcohol and cannabis

This session was designed to explore the size of the problem of addictions to alcohol and cannabis, and the trends and trajectory of addictions, in the UK and France. It also provided an opportunity to reflect on the impact of such addictions.

The session was composed of two keynote presentations, followed by some additional reflections from two additional panel members, and a wider audience discussion session.

Professor Anne Lingford-Hughes, Chair in Addiction Biology, Imperial College London, began the session by providing a UK perspective on the trends in alcohol and cannabis use.

Professor Lingford-Hughes noted that alcohol use is decreasing in young people, although the number of young women who are drinking heavily has been growing. She added that there has also been a growth in the number of non-drinkers. Several factors appear to be responsible for this increasing abstinence, including increasing recognition of the associated health concerns. While heavy drinking is often the focus of concern, Professor Lingford-Hughes reflected that those who abstain from alcohol also face challenges in certain cultural settings, such as universities, which have come to be associated with heavy alcohol consumption.

Nevertheless, drinking remains a significant issue in young people and acute harm is still common, with occasional hospital admissions of children as young as 10 years old. Young people who smoke also tend to drink, and levels of hazardous drinking (such as binge drinking) are high in young people. Serious health issues and dependence tend to emerge at older ages, as people discover they struggle to stop drinking or face the impact of accumulated damage from alcohol. Certain communities, such as the military, appear to have significant issues, linked to ingrained drinking cultures.

Cannabis is a class B drug in the UK. Its use in the UK is currently largely stable and has dropped since a peak in the 1990s. Use is highest in young people, as is cannabis dependence, although Professor Lingford-Hughes commented that this too appears to be falling. Increased consumption by young women is less marked than for alcohol.

Synthetic cannabinoids represent an emerging public health threat in the UK. These can be difficult to detect, variable in content, but often highly potent. They have become a major problem in UK prisons, where staff have struggled to control the use of such synthetic drugs as 'spice' and 'black mamba'.

Recently, regulation in the UK has been amended to allow use of cannabis products for specific medical conditions, such as epilepsy. However, they can only be prescribed by specialist physicians.

Professor Lingford-Hughes also pointed out that there is an urgent need to understand more about the interplay between drug use, social and environmental influences, and the developing brain. The brain undergoes fundamental neurobiological changes through adolescence, and any influences during this maturation process could have profound long-term implications for brain, behaviour, and health.

Dr Emmanuelle Godeau, Enseignante-Chercheure, École des Hautes Études en Santé Publique, followed by providing a complementary French perspective, as well as making comparisons across Europe.

Dr Godeau drew on the fact that France has a range of large-scale, high-quality national data sources that provide information about substance use among young people of varying ages.

She explained that these data suggest that alcohol use starts early in France, with half of 11-year-olds having tried alcohol, a figure that rises to nine out of ten by age 18–25.⁶

Experimentation with cannabis typically starts later, at around age 15; around half of young people have used the drug by age 18–25, with use slightly higher among young men. Age of initiation has shown little change since 2000, but there is a noticeable new trend of continuing cannabis use into early adulthood.

Alcohol consumption in young people has declined since the turn of the century, as has cannabis use, although to a smaller degree. Use of cannabis over the past year has increased across all age groups, but especially in young people, with further evidence that young people are not stopping cannabis use as they reach adulthood.

Dr Godeau reflected that smoking and alcohol use are both also in decline across the EU. Cannabis use is also falling, although to a lesser degree, and remains relatively high in France compared with other European nations.

Alcohol use at age 15 shows large variation across Europe. Use has fallen significantly in England, Scotland and Wales, although from a high baseline. Similarly, intoxication rates are high in England, Scotland and Wales and, although they have also shown steep falls in recent years, this has again been from very high baselines. Such strong declines have not been observed in France, although the baseline was much lower in the first place. As a result, the levels of alcohol use in France, England, Scotland and Wales are now much more alike.

Panel session and wider discussion

Following these two presentations, Professor Matthew Hickman, Professor in Public Health and Epidemiology, and Head of Population Health Sciences, University of Bristol, and Professor Alfred Spira, Professor of Public Health, Paris XI University and Member of the Académie Nationale de Médecine, provided some additional reflections as part of a panel session, before wider audience questions and contributions identified yet further key themes on the epidemiology of addiction.

Professor Matthew Hickman

- The drop in alcohol consumption among young people – seen in many countries - is notable but the reasons behind it are unclear; it is therefore difficult to shape new interventions or identify appropriate policy recommendations to encourage further reductions.
- Unlike alcohol, there is no standard measure of cannabis exposure (a ‘unit’ of cannabis); this would be difficult to define as cannabis includes a range of active ingredients, the levels of which vary significantly. However, a standard measure could focus, in the first instance, on the primary psychoactive constituent THC (tetrahydrocannabinol).
- Without such a measure it is difficult to determine dose–response relationships and associations between consumption and harm; this makes it harder to compare frequent and occasional recreational use or to determine recommended minimum levels.
- An extensive evidence base has been generated on associations between alcohol consumption and a wide range of harms, and similar evidence is now required for cannabis.

⁶ <https://www.ofdt.fr/enquetes-et-dispositifs/#epgj>

Professor Alfred Spira

- Tobacco use is in decline across Europe and, as for alcohol, the reasons for this are not completely understood. It may be possible that increased rates of other addictions (including smartphones) could be involved.
- There are no obvious links between the strictness of cannabis regulation and national consumption - for example, Sweden and France have very different attitudes, but consumption is high in both countries.
- Changes in policy (such as a shift in France's cannabis policy in January 2019) offer quasi-experimental opportunities to gather evidence on policy impacts.
- Social norms and attitudes to drugs of addiction are an important factor but are incompletely understood; a 'syndemic' approach – taking into account the biological, psychological, social, economic, environmental, and political contexts - could help to clarify the numerous different, and often interacting, factors influencing drug-taking behaviours.

Wider discussion

- Delegates noted that the continued use of cannabis into adulthood is an interesting new trend, and suggests that cannabis consumption may be becoming 'normalised'.
- One implication of this is the increased risk of childhood exposure to, or consumption of, parents' drugs.
- Delegates also reflected that there is some recent evidence indicating that the strength of cannabis products is increasing,⁷ and cannabis users have no easy way to judge their intake of cannabis's active ingredients.
- Cannabis use has traditionally had a strong link with tobacco use. Birth cohort data suggest that cannabis use may precede tobacco use, but the relationship between the two is complex and may be setting-specific – in the USA, for example, a rise in cannabis vaping may drive a drop in tobacco use.

7 Freeman T, et al (2018). Increasing potency and price of cannabis in Europe, 2006–16. *Addiction* doi: 10.1111/add.14525

Public health and legal frameworks

The second session outlined and assessed the relative contributions of both public health and legal frameworks to prevent, or reduce, addiction and its impact, again providing opportunity to compare UK and French systems.

As with the previous session, the topic was explored via two keynote presentations followed by the contributions of two additional panel members, and a wider audience discussion session.

Professor Sir Ian Gilmore, honorary consultant physician, Royal Liverpool University Hospital, focused on alcohol consumption in the UK, and in particular the policy tools available to influence alcohol use.

He noted that rates of premature mortality as a result of alcohol have fallen in France, but have been increasing in the UK. Alcohol harms also have an equity dimension, with higher levels of consumption and alcohol-related ill-health among the socioeconomically disadvantaged. Consumption and harm also appear to be concentrated in subpopulations – 30% of drinkers are responsible for 70% of alcohol consumption. Cultural shifts are evident among young people, although the reasons for their declining alcohol consumption are unclear.

Professor Gilmore noted that alcohol policy was relevant to multiple government departments. Policy could also be considered at EU, national and local levels, and could target either individuals or populations. Policy tools could be formal or voluntary, directive or more subtle 'nudges', and enforced or tokenistic. He suggested that the drinks industry tended to argue for policy measures targeting individuals, framing alcohol consumption as an issue of personal responsibility.

He also suggested that evidence is available on policy measures to reduce alcohol use, including pricing (such as taxation, minimum unit prices), promotions (bans on discounts and multiple-buy offers) and availability (sales bans, restricted hours of sale, control of outlet density). He noted that, despite restrictions on advertising, sponsorship – particularly in sport – provided an alternative way to raise the profile of alcoholic products. While education initiatives may increase levels of awareness, they tend to have little impact on behaviour.

Alcohol policy varies across the devolved nations of the UK, and Professor Gilmore pointed out that Scotland has been particularly active in alcohol policy-making. He also argued that, owing to conflicts of interest, the drinks industry should not be involved in policy-making, and highlighted a worrying trend in declining public health budgets.

Professor Jean-Claude Alvarez, Professor of Medicine in Pharmacology, University Versailles Saint Quentin-en-Yvelines, focused on the steps France had taken to improve road safety and minimise alcohol- and narcotic-related accidents.

He began by outlining that before 1970, alcohol was seen as a mitigating factor after road traffic accidents. After 1970, in a bid to reduce death rates on French roads, alcohol became an aggravating circumstance and the first limits on blood alcohol levels were introduced.

Over time, permitted alcohol levels have gradually been lowered and punishments for infringements have increased. In combination with other road safety initiatives, this has led to a marked reduction in road fatalities in France.

Between 2008 and 2017, the total number of alcohol level tests dropped slightly, from 11.3 to 9.9 million, and the number of positive tests declined from 352,000 to 315,000 (although the proportion of positive tests has been relatively stable at about 3%). Similarly, the proportion of positive tests associated with accidents has hardly changed, amounting to 8.3% in 2017 (although the number of injuries and deaths have both fallen significantly, as has the number of traffic offences related to alcohol).

Notably, however, alcohol is a leading cause of death and disability in young people aged 18–25 years. In 2017, of 3448 road deaths, alcohol levels above the legal limit were found in

30% of cases. Although the sale of alcohol to minors has been prohibited since 2009, a 2013 study found that 40% of retailers were not adhering to the law and 30% of 16-year-olds had bought the alcohol they consumed.

Between 2001 and 2003, testing of more than 10,000 drivers involved in a fatal traffic accident identified evidence of cannabis use in 7% of drivers. Driving under the influence of cannabis was associated with an increased risk of being responsible for a fatal accident and there was a clear association between risk and tetrahydrocannabinol levels. Alcohol and cannabis together were associated with a 14-fold increased risk.

From 2003, testing for cannabis has been carried out after fatal accidents using blood samples. In 2008, salivary tests were introduced, although tests were still confirmed by the analysis of blood samples until 2016, at which point salivary confirmation was also possible in a live driver. However, remaining issues for the accuracy of cannabis testing arises from the differences in the metabolism of cannabinoids between occasional and chronic users, and the different timescales over which cannabis use affects driving performance in such groups.⁸

The number of cannabis tests taken increased from 29,000 in 2008 to 286,000 in 2017. However, the proportion of positive tests has fallen from 54% to below 20% in this period due to less targeted screening. In 2015, 23% of fatal accidents (3461) were related to narcotics consumption. The number of road traffic offences has been stable between 2008 and 2017, but the proportion involving narcotics has increased significantly, from 2.4% to 8.3%.

To reduce harms further, Professor Alvarez suggested that laws on sale of alcohol should be more rigorously enforced and consumption of cannabis discouraged. He also suggested more random testing for narcotics, as carried out for alcohol.

Panel session and wider discussion

As with the previous session, the two presentations were followed by shorter reflections from Professor Jean-Pierre Olié, Member of the Académie Nationale de Médecine and Professor Julia Sinclair, Professor of Addiction Psychiatry, University of Southampton, before a wider audience discussion provided an opportunity to explore the topic further.

Professor Jean-Pierre Olié

- France has an interministerial 'Mission for Combating Drugs and Addictive Behaviors (MILDECA)', which coordinates and contributes to public policy regarding drug use and addiction in France.⁹
- This interministerial mission has an important role to play in establishing an integrated national addiction strategy, with national approaches being implemented regionally, through integrated cross-sector responses.
- Addiction to one substance may predispose to further addictions – it may be helpful to think in terms of primary and secondary prevention.

8 Hartley S, et al (2019, in press). Effect of smoked cannabis on vigilance and accident risk using simulated driving in occasional and chronic users and the pharmacokinetic / pharmacodynamic relationship. Clin Chem.

9 <http://ghdx.healthdata.org/organizations/interministerial-mission-combating-drugs-and-addictive-behaviors-mildeca-france>

Professor Julia Sinclair

- Insufficient attention may have been given to cannabis use during pregnancy, especially teenage pregnancy, with the UK having one of the highest rates amongst EU countries.
- Evidence suggests that prenatal marijuana exposure may be associated with poor offspring outcomes, for example low birth weight, and impaired neurodevelopment.
- The social inequalities inherent in teenage pregnancies have the potential to cause a trans-generational escalation of these inequalities by affecting health and behavioural outcomes in future generations.
- There are currently few if any public health messages around cannabis consumption during pregnancy, unlike alcohol, where risks of harms such as fetal alcohol syndrome are well recognised and guidelines on alcohol consumption are widely promoted.

Wider discussion

- The co-Chair of the session, Professor Jean Costentin, Professor of Pharmacology, l'Université de Rouen, Académie Nationale de Médecine, noted that there is emerging evidence from rat studies and human observations to suggest that THC/cannabis can have transgenerational effects, as children born to parents who used cannabis before conception, or during pregnancy, have increased addictive behaviours during adolescence.¹⁰
- The available evidence suggests that this might occur by THC/cannabis use resulting in epigenetic modifications to the gene encoding dopamine receptors, resulting in reduced dopamine signalling and a greater need to rely on addictive substances to experience sensations of pleasure.
- Professor Costentin added that this evidence raises an urgent need to help prevent addictions in those of child-bearing age.
- Other delegates also noted that while associations between substance use and mental disorders are strong, the direction of the association are not always clear. They noted that birth cohort data suggest that substance use precedes mental health difficulties, although associations between cannabis and psychosis are strongly attenuated by tobacco use. Others added that additional evidence suggests that cannabis use impacts on outcomes such as educational attainment.
- As well as dosage effects, participants reflected on whether the mode of cannabis administration might influence the extent to which it is harmful - smoking, for example, may be a more harmful route of consumption, at least in terms of lung damage.
- Despite a strong evidence base on the impact of alcohol policy measures, political action in some countries has been limited, despite apparent public support for greater alcohol regulation.

10 Szutorisz H & Hurd YL (2016). Epigenetic Effects of Cannabis Exposure. *Biol Psychiatry*. 2016 Apr 1; 79(7):586-94.

Health systems and services

The third session explored how health systems respond to the issue of alcohol and cannabis addiction in the UK and France, and the difficulties faced by healthcare providers and patients. This provided an opportunity to compare the advantages and disadvantages of the UK and French systems, with a long-term goal of applying lessons from one country to the other.

This session followed the earlier format of two keynote presentations, two panel presentations, and wider discussion with the audience on the topic of health systems and services. It was then followed by a final discussion session opportunity to further explore the themes to emerge during the earlier sessions and identify any outstanding concerns.

Professor Colin Drummond, Professor of Addiction Psychiatry, King's College London, described trends in the epidemiology of addiction in the UK and the current state of addiction services.

He noted that, while alcohol, tobacco and drug use were all showing signs of decline, health impacts were increasing significantly in older age groups. For example, the death rate from liver disease, often related to alcohol consumption, has increased markedly, and shows a significant socioeconomic gradient. Emerging threats include prescription medicines and novel psychotropic drugs.

Professor Drummond noted that deaths linked to heroin use declined in the 2000s as a result of UK Government criminal justice initiatives. However, numbers have begun to rise again in recent years, coinciding with cutbacks in funding and a transfer of responsibilities from the NHS to local authorities.

He also pointed out that people with addictions typically have a range of health problems, particularly mental disorders as well as multiple addictions. Often, addiction is not seen as a primary morbidity in such individuals, and many are not in contact with addiction services. Furthermore, a relatively small number of individuals with multiple health issues are responsible for a disproportionately high use of healthcare resources.

UK addiction services have faced many challenges, including a marked decline in the number of addiction specialists. Professor Drummond suggested that services had been affected by limited funding and loss of ring-fencing, and that outsourcing of services to third sector organisations (i.e. those outside of the health service) had introduced costly, time-consuming and potentially disruptive procedures and largely separated accessible addiction services from mainstream NHS services.

He suggested that more integrated models are required, particularly targeting those responsible for the greatest use of healthcare resources. A randomised controlled trial of an 'assertive outreach' programme involving multidisciplinary teams, for example, not only identified significant health benefits but also potentially substantial cost savings.^{11,12} He argued that neglecting addiction services was therefore a false economy.

In conclusion, Professor Drummond identified a range of system-level and practice-level changes that could improve addiction service provision in the UK.

Professor François Paille, Professional College of Actors in Addictology, discussed the structures and processes involved in the French addiction care plan.

This approach has evolved over time, and is sensitive to the nature of the substance being abused and local settings. It offers a comprehensive system, although the degree of implementation has been varied.

11 Drummond C, et al (2016). Assertive community treatment for people with alcohol dependence: a pilot randomized controlled trial. *Alcohol and Alcoholism* doi: 10.1093/alcalc/agw091

12 Drummond C, et al (2018). *Assertive Outreach for High-Need, High-Cost Alcohol-Related Frequent Attenders: the Value Base Case for Investment*. National Institute for Health Research, Collaborations for Leadership in Applied Health Research and Care, South London.

The addiction care plan is based on four key pillars: primary care/GP-coordinated care and support; specialist local addiction centres (such as Centres de Soins, d'Accompagnement et de Prévention en Addictologie (CSAPA) and Centres d'Accueil et d'Accompagnement à la Réduction des Risques pour Usagers de Drogues (CAARUD)); hospital-based care; and mutual aid associations.

He noted that GPs are generally the first line of care. They coordinate a range of care and support with the involvement of other health care workers and pharmacists. CSAPA provide a fusion of alcohol rehabilitation and illegal drug addiction centres now focusing on all forms of addiction. Support is provided through multidisciplinary teams with a strong focus on social support and reintegration into communities. They offer emergency facilities as well as various options for longer-term support. CAARUD are focused on risk reduction, particularly for heroin and injected drugs, and play a relatively minor role in the management of alcohol and cannabis addiction.

Professor Paille suggested that hospital care was a weak link in the addiction care plan model in France. Emergency departments are well-placed to manage the immediate consequences of an addiction-linked health crisis, but are less able to provide access to long-term support. There may also be missed opportunities to identify those at risk of addiction and to initiate early interventions.

In terms of young people, Professor Paille suggested that their needs are slightly different. They are less likely to be dependent on substances and tend to need more help for acute health issues, and are therefore less likely to be admitted to hospital or require residential care.

A 2016 survey of CSAPAs found that 375 facilities were managing 308,000 individuals.¹³ The numbers of young people have been increasing, with individuals under 18 years or 18–24 years accounting for 15% of all attenders (although 23% of those seeking help for use of illicit drugs). Some 48% of CSAPA patients were seeking help for alcohol and 20% for cannabis, although for young users these figures were 10% for alcohol and 70% for cannabis. In younger and older groups, addiction to multiple substances is common.

Professor Paille suggested that the French model has several strong points, including a coherent national plan with a strong emphasis on outpatient follow-up and local GP-mediated support, the possibility of early local interventions for young people, and coordinated support for multiple addictions. Weaknesses included a lack of access to specialist care in some areas (particularly rural areas), a reluctance of GPs to address alcohol and cannabis use, a lack of targeted treatment for addiction in hospitals, difficulty in coordination across specialties, and a complex care pathway that could be confusing for patients.

Panel session and wider discussion

The panel session saw contributions from Professor Eilish Gilvarry, Honorary Professor of Addiction Psychiatry and Clinical Director of Specialties, Northumberland, Tyne & Wear NHS Foundation Trust, and Professor Michel Lejoyeux, Professor of Psychiatry and Addictive Medicine, Denis Diderot University, and Member, Académie Nationale de Médecine.

¹³ Les centres de soins, d'accompagnement et de prévention en addictologie en 2016 : situation en 2016 et évolutions sur la période 2005-2016 analyse des données des rapports d'activité des CSAPA <https://www.ofdt.fr/BDD/publications/docs/epfxcpya.pdf>

Professor Eilish Gilvarry

- People with addictions are typically addicted to multiple substances and have multiple additional health problems, including mental disorders.
- People with addictions are vulnerable populations, more often outside the formal education system and in contact with the criminal justice system.
- Addiction services for young people face more specific legal and ethical issues, for example parental responsibility, as well as challenges related to the transition to adult services.
- US care models tend to focus on rehabilitation centres and hospitalisation while UK support is typically more community based; there is a deficit in evidence on the effectiveness of service models and context.
- Despite the benefits of screening for drug and alcohol use at points of contact with health systems so support can be provided, in practice this is not consistent practice.

Professor Michel Lejoyeux

- The question of integration of services is a key one, but it is unclear how such integration could be achieved or whether it would deliver benefits in practice.
- Potentially more efforts could be made in hospital settings to identify substance use disorders and addiction.
- The high healthcare costs of severe cases highlight the importance of prevention.
- International comparisons could answer important questions relating to effective models of support.
- Addiction specialists are key figures in service provision and an appropriately skilled healthcare workforce is essential.

Wider participant discussion

- The French interministerial mission provides a good foundation for integrated national responses, backed up by coordinated regional responses. Nevertheless, while devolved services can ensure that they are tailored to local settings, there is also a risk that service provision becomes subject to local influences that are not necessarily evidence-based.

General discussion

Following the three sessions, one final discussion session was held provide the opportunity for participants to further explore the themes to emerge during the earlier sessions, but also to raise any outstanding areas of importance. During this session, it was noted that the current responses aiming to prevent or minimise the harms of cannabis use run the risk of criminalising young people, with could have potentially significant implications for their future. It was further added that there is less emphasis on providing support for managing substance use disorders and preventing addiction. Participants also suggested that increasing medical use of cannabis could present challenges to public health messaging, promoting perceptions that cannabis is of more general medical benefit.

The need to ensuring adequate training was also identified as a further key issue in need of addressing - addiction specialists have a key role to play, meaning that the dwindling numbers in the UK are a cause for concern. Alongside this, GPs may also need more training on recognising, preventing and managing substance use disorders.

Conclusions and ways forward

As a result of the meeting, a number of existing evidence gaps were identified, which delegates agreed should be areas of future research in order to improve responses to addiction in both the UK and France.

These evidence gaps span scientific uncertainties, health service organisation, and advocacy, while some additional methodological considerations were also highlighted, as outlined below.

Neurobiological understanding

- **What is the impact of cannabis use during pregnancy and what are its effects on future generations?** Alcohol use is known to affect fetal development but the impacts of cannabis are less clear. Prenatal exposure to cannabis may also have impacts on future generations. Such work could underpin greater public health messaging on cannabis use in pregnancy.
- **What is the neurobiological impact of substance use on young people's developing brains, and what are the long-term consequences?** Adolescence is a period of profound neurobiological change. It is important to understand the interplay between substance use, neurodevelopment and social influences on the developing brain and the long-term implications for brain, behaviour, health and wellbeing.

Service design

- **How can services best be designed to take account of multiple addictions and additional morbidities?** Alcohol or cannabis dependence is rarely seen in isolation – individuals typically have a range of addictions, mental disorders, and other physical health issues such as liver disease, infectious diseases including HIV and chronic hepatitis C infection, and also chronic respiratory disease. It is a challenge for health systems to provide integrated patient-centred care to help with the full range of morbidities often faced by those with addictions.
- **What is the optimal design for services specifically targeted to young adults?** Health problems associated with alcohol and cannabis use among young people typically first manifest in adolescence, and such services should also be considered.
- **How can the uptake of services be increased and what is the role of early screening?** Only a minority of individuals with problematic substance abuse receive treatment. An important challenge is to identify ways to improve take up of services, particularly at early stages of addiction, for example this could happen at first contact with health systems or through population-based screening.
- **What can international comparisons tell us about optimal service design?** Countries have evolved different approaches to addiction services. Systematic assessment of these differences and their impact on health and social outcomes (France–UK or wider EU comparisons) could highlight effective features of service delivery to inform policy development. The European Monitoring Centre for Drugs and Drug Addiction could lead on such studies.
- **How can drug use in prisons be better managed and what addiction services should be provided?** Drug use in prisons, particularly of synthetic cannabinoids, is a major challenge. There is an urgent need to identify effective approaches to mitigate the harm caused by these substances to prisoners and prison staff.

Advocacy

- **How can addiction/substance use disorders be made a higher health and social priority?** Addiction services are underfunded and appear a low political priority across much of Europe. Further work is needed to identify approaches to prioritise addiction and promote evidence-based policymaking.
- **How can implementation of evidence-based alcohol harm-reduction policies be enhanced?** An extensive body of evidence is now available on the policy options to address harmful alcohol consumption. A major challenge is to identify approaches to promote the implementation of effective evidence-based policies at national and local levels.

Methodological issues

- **How can 'exposure' to cannabis be assessed quantitatively?** The definition of alcoholic units has provided a common measure for assessing the intake and impacts of alcohol use, and facilitated clarity in policy-making. No such definitions exist yet for cannabis.
- **How can 'natural experiments' such as national policy changes be exploited to generate evidence to guide policy-making?** France introduced a new cannabis policy in January 2019, and a range of countries and US states have recently changed policy positions. There are opportunities to research the impact of these changes to support evidence-based policy-making.

Annex 1: Steering committee

The meeting agenda and format was informed by an expert steering committee including:

- **Professor Jean Ades**, Emeritus Professor of Psychiatry, Paris 7 University; Past President, French Society of Alcoolology
- **Professor Jean-François Allilaire**, Emeritus Professor of Psychiatry, Paris-Pierre and Marie Curie University; Permanent Executive Officer Deputy, Académie nationale de médecine
- **Professor Bruno Falissard**, Professor of Public Health, Paris-Saclay University
- **Professor Sir John Strang FMedSci**, Professor of Addictions and Head of the Addictions Department, King's College London
- **Professor Pamela Taylor CBE FMedSci**, Professor of Forensic Psychiatry, Cardiff University
- **Professor Sir Graham Thornicroft FMedSci**, Professor of Community Psychiatry, King's College London

The Academy of Medical Sciences and the Académie Nationale de Médecine are most grateful to the committee for their work.

Annex 2: Speakers and agenda

Speakers

- **Professor Hans-Jörg Albrecht**, Managing Director, Max Planck Institute for Foreign and International Criminal Law
- **Professor Jean-Claude Alvarez**, Professor of Medicine in Pharmacology, University Versailles Saint Quentin-en-Yvelines
- **Professor Colin Drummond**, Professor of Addiction Psychiatry, King's College London
- **Dr Emmanuelle Godeau**, École des hautes études en santé publique
- **Professor Sir Ian Gilmore**, Honorary consultant physician, Royal Liverpool University Hospital
- **Professor Anne Lingford-Hughes**, Chair in Addiction Biology, Imperial College London
- **Professor François Paille**, Professional College of Actors in Addictology

Panel members

- **Professor Eilish Gilvarry**, Honorary Professor of Addiction Psychiatry; Clinical Director of Specialties, Northumberland, Tyne & Wear NHS Foundation Trust
- **Professor Matthew Hickman**, Professor in Public Health and Epidemiology; Head of Population Health Sciences, University of Bristol
- **Professor Michel Lejoyeux**, Professor of Psychiatry and Addictive Medicine, Denis Diderot University; Member, Académie Nationale de Médecine
- **Professor Jean-Pierre Olié**, Académie Nationale de Médecine
- **Professor Julia Sinclair**, Professor of Addiction Psychiatry, University of Southampton
- **Professor Alfred Spira**, Professor of Public Health, Paris XI University; Member of the Académie Nationale de Médecine

Agenda

08.30 – 09.00	Registration
09.00 – 09.10	Welcome to symposium <ul style="list-style-type: none"> • Professor Daniel Couturier, Permanent Executive Officer, Académie Nationale de Médecine
09.10 – 09.20	Introduction to symposium <ul style="list-style-type: none"> • Professor Jean-François Allilaire, Permanent Executive Officer Deputy, Académie Nationale de Médecine • Professor Sir John Strang FMedSci, Professor of Addictions, King's College London
09.20 – 09.50	Keynote presentation: European legal and human rights context Chair: Professor Sir John Strang FMedSci <ul style="list-style-type: none"> • Professor Hans-Joerg Albrecht, Max Planck Institute for Foreign and International Criminal Law

<p>Session One: Epidemiology and impact</p> <ul style="list-style-type: none"> • co-Chair: Professor Bruno Falissard, Professor of Public Health, Paris-Saclay University • co-Chair: Professor Pamela Taylor FMedSci, Professor of Forensic Psychiatry, Cardiff University <p>This session will explore the size of the problem (accounting for difficulties in capturing data), and the trends/trajectory of addiction in the UK and France. The epidemiology of addiction at the population level and within defined sub-populations (e.g. schools, prisons, hospital, and the armed forces) will be discussed.</p>	
09.50 – 10.10	<p>Presentation: The UK perspective</p> <ul style="list-style-type: none"> • Dr Anne Lingford-Hughes, Chair in Addiction Biology, Imperial College London
10.10 – 10.30	<p>Presentation: The French perspective</p> <ul style="list-style-type: none"> • Dr Emmanuelle Godeau, Enseignante-Chercheure, École des hautes études en santé publique
10.30 – 11.10	<p>Panel discussion</p> <ul style="list-style-type: none"> • Dr Emmanuelle Godeau, École des hautes études en santé publique • Professor Matthew Hickman, Professor in Public Health and Epidemiology; Head of Population Health Sciences, University of Bristol • Professor Anne Lingford-Hughes, Chair in Addiction Biology, Imperial College London • Professor Alfred Spira, Professor of Public Health, Paris XI University; Member of the Académie Nationale de Médecine
11.10 – 11.40	<p>Refreshment break</p>
<p>Session Two: Public health and legal frameworks</p> <ul style="list-style-type: none"> • co-Chair: Professor Jean Costentin, Professor of Pharmacology, l'Université de Rouen, Académie Nationale de Médecine • co-Chair: Professor Pamela Taylor FMedSci, Professor of Forensic Psychiatry, Cardiff University <p>This session will outline and assess the relative contributions of both public health and legal frameworks to prevent or reduce addiction and its impact, again providing opportunity to compare the UK and French systems. Given the focus on 'young people', there will be an opportunity to reflect on comparisons seen across those of differing legal status (younger than vs older than 18 years) and to discuss the role of parents and other institutions beyond the healthcare and criminal justice systems i.e. those mentioned in Session One (schools, hospitals, prisons).</p>	
11.40 – 12.00	<p>Presentation: The UK perspective</p> <ul style="list-style-type: none"> • Professor Sir Ian Gilmore, Honorary consultant physician, Royal Liverpool University Hospital
12.00 – 12.20	<p>Presentation: The French perspective</p> <ul style="list-style-type: none"> • Professor Jean-Claude Alvarez, Université de Versailles Saint-Quentin
12.20 – 13.00	<p>Panel discussion</p> <ul style="list-style-type: none"> • Professor Jean-Claude Alvarez, Université de Versailles Saint-Quentin • Professor Sir Ian Gilmore, Honorary consultant physician, Royal Liverpool University Hospital • Professor Jean-Pierre Olié, Académie Nationale de Médecine

	<ul style="list-style-type: none"> • Dr Julia Sinclair, Professor of Addiction Psychiatry, University of Southampton
13.00 – 14.30	Lunch
<p>Session Three: Health systems and services</p> <ul style="list-style-type: none"> • co-Chair: Professor Jean Ades, Académie Nationale de Médecine • co-Chair: Professor Sir John Strang FMedSci, Professor of Addictions, King's College London <p>This session will explore how health systems respond to the issue of alcohol and cannabis addiction in the UK and France, and the difficulties faced either by healthcare providers or patients. This will provide an opportunity to engage in comparative discussions to identify advantages and disadvantages of the UK and French systems, with a long-term goal of applying lessons from one country to the other.</p>	
14.30 – 14.50	<p>Presentation: The UK perspective</p> <ul style="list-style-type: none"> • Professor Colin Drummond, Professor of Addiction Psychiatry, King's College London
14.50 – 15.10	<p>Presentation: The French perspective</p> <ul style="list-style-type: none"> • Professor François Paille, Professional College of Actors in Addictology
15.10 – 15.50	<p>Panel discussion</p> <ul style="list-style-type: none"> • Professor Colin Drummond, Professor of Addiction Psychiatry, King's College London • Professor Eilish Gilvarry, Honorary Professor of Addiction Psychiatry; Clinical Director of Specialties, Northumberland, Tyne & Wear NHS Foundation Trust • Professor Michel Lejoyeux, Académie Nationale de Médecine • Professor François Paille, Professional College of Actors in Addictology
15.50 – 16.20	Refreshment break
16.20 – 17.20	<p>General discussion</p> <p>Each Session Chair will provide a brief 5 minute overview of the key messages to emerge from each Session. General discussion will allow delegates to agree on the priorities for future research to better address the identification, prevention, and/or management of addictions in young people.</p>
17.20 – 17.30	<p>Conclusions</p> <ul style="list-style-type: none"> • Professor Jean-François Allilaire, Permanent Executive Officer Deputy, Académie Nationale de Médecine • Professor Sir John Strang FMedSci, Professor of Addictions, King's College London
17.30 – 20.00	Networking reception



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