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International Journal of Drug Policy

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Commentary

Encouraging a 'generational shift' in the UKs relationship with drugs. A commentary on the new UK drug strategy. What can be achieved with drug prevention?



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The UK Government's recent 10-year *Drug Strategy, From Harm to Hope* (the Strategy), presents an ambition to "achieve a generational shift in the country's relationship with drugs and to reduce overall drug use towards a historic 30-year low" through "bold steps to change attitudes in society around the perceived acceptability of illegal drug use" (H.M. Government, 2021a). In this commentary, I focus on the potential impacts of drug prevention activity outlined in the Strategy and consider the feasibility of achieving this headline outcome considering constraints on UK prevention systems. Here, drug prevention is defined as those policies, programmes and practices intended to reduce the initiation, continuation, and escalation of drug use (Sloboda & Petras, 2014). Whilst prevention is relevant across the life course and different profiles of substance use (ACMD, 2015), this commentary primarily focuses on young (aged < 25) "non-dependent, so-called recreational drug users" who report the highest rates of drug use (H.M. Government, 2021a, p. 4).

Drug use is increasing in the UK, and it is unclear why

All forms of substance use (including tobacco and alcohol) have been in decline in the UK since the historic highs reported in the late 1990s and early 2000s (ONS, 2020). Use of any illicit drug in the last year reported by English school children (aged 11-15) fell by 15% between 2001 and 2014, and by 34% in young adults (16-24 year olds) in England and Wales (NHS Digital, 2019; ONS, 2020). A 'historic 30-year low' (use of any illicit drug in the last year) was reported during this period (2012/13), in both young (16-24; 16.5%) and adult (16-59; 8.2%) populations. However, although alcohol use in young people has continued to decline (Holmes et al., 2022), illicit drug use has begun to increase again, albeit below historic peaks and without any notable increases in frequency of use. Use of any drug in the previous year increased by 70.0% in 11-15 year olds between 2014 and 2018 (10.0% to 17.0%), and by 7.7% in 16-24 year olds between 2014/15 and 2019/20 (19.5% to 21.0%) (most recent available comparable datasets). Cannabis, nitrous oxide and ketamine have contributed most to the increase, with some evidence that the mean number of drugs reported also increased (ONS, 2020).

Population level changes in controlled drug use is under-theorised and under-researched in the UK and so it is unclear why this happened. Drug trends are inconsistent across relevant geographies (e.g. Europe, Australia, and North America), but work on factors contributing to global declines in youth alcohol use is more advanced, and highlights a complex interaction between diverse structural and cultural factors, including general health conscientiousness and risk perception, the changing role of alcohol in socialisation practices and identity-making, and the normalisation of non-drinking and acceptance of non-drinking for cultural and religious reason (Caluzzi, et al., 2022; Holmes, et al., 2022; Kraus, et al., 2019; Room, et al., 2020). Notably, these mechanisms were not the direct targets of alcohol policy. If a similar range of factors that underlie changes in alcohol use are also important in determining trends in controlled drug use, then use may naturally decline. (ONS, 2020). Strategy ambitions could therefore be achieved as part of long-term cycles of drug consumption, but through mechanisms and actions other than those outlined in the Strategy. Furthermore, unlike alcohol, the majority of controlled drug use in the UK is infrequent and time-limited, and people tend to cease or reduce use across their twenties as they take on social and employment obligations. So recent increases in lifetime or last year prevalence in more recent birth cohorts are unlikely to be maintained as they age.

However, public expectations of governmental responses to illicit drug use and its centrality to wider criminal justice policy means 'doing nothing' is not politically feasible (H.M. Government, 2013; Reuter & Pollack, 2006). It also remains of substantive academic interest to understand the changes in underlying mechanistic factors that led to a reversal of the decline, including the external influence of wider health and social policy. Whilst the Strategy makes explicit links between some of these factors (e.g. attitudes \rightarrow norms \rightarrow use behaviour), a cohesive explanation of how prevention policy can influence this process at a population level has not yet been developed.

There are no effective population-level drug prevention actions

Where substance use prevention has been successful (e.g. tobacco, and to a lesser extent alcohol), this has largely been as a component of a multileveled approach with a strong population-level focus, including clearly defined policies, actions to foster public support and mobilise professionals, legislation to reduce access, use opportunities and product affordability, as well as classic prevention initiatives such as

individual-level interventions and health education (Chung-Hall, Craig, Gravely, Sansone, & Fong, 2019; Kuijpers, Willemsen, & Kunst, 2018; Rehm, Babor, & Room, 2006). This type of comprehensive policy environment can also create feedback loops whereby social, attitudinal, behavioural, and cultural change is influenced by policy (e.g. smokefree legislation leading to new socialisation practices, and reinforcing negative attitudes towards smoking), which can then drive further action (e.g. shifts in social norms, socialisation practices and attitudes signals public acceptance and likely adherence to further preventive action) (Anyanwu, Craig, Katikireddi, & Green, 2020; Hargreaves, et al., 2010; Kelly, 2009; Mlinarić, et al., 2019; Pentz, 2000; Rutter, et al., 2017).

Designing drug prevention to reduce population prevalence requires embedding actions within similar structures, but the suite of effective responses available to policy makers is restricted. The international evidence base is sufficiently developed to support quality standards in prevention organisation and delivery, and there are published guidelines on effective programmatic interventions (Brotherhood & Sumnall, 2011; Ferri, et al., 2016; UNODC, 2018). However, unlike for alcohol and tobacco, there are no agreed 'best buys' in drug (prevention) policy (World Health Organization, 2017).

International drug control commitments, and successive strategies that have publicly prioritised 'tough' responses to use (e.g. 'Boris Johnson unleashes all-out war on drugs to clean up Britain's crime-plagued streets'; Wooding (2021)) (Monaghan, 2012; Winstock, Eastwood, & Stevens, 2021) have meant that key population-level interventions for legally regulated substances (e.g. pricing and advertising controls to influence consumer choice), are either not available in the UK, or are not politically palatable (e.g. a move towards legally related cannabis markets).

Furthermore, for substances with a high baseline prevalence, lower risk or lighter/irregular groups of people who use drugs (PWUD) may be most susceptible to these population level approaches. Tobacco use in the UK, for example, has fallen dramatically over the last 50 years, and prevalence (15.2% in young adults) is now less than cannabis (18.7%) (ONS, 2021b; Opazo Breton, et al., 2021). 'Hardening' theory would suggest that there may be a plateauing effect, and new approaches would be needed to drive further falls as remaining people who smoke tobacco are more likely to be the group of PWUD with heaviest and dependent patterns of use, have comorbidities, and fewer social and economic resources (Warner & Burns, 2003). However, smoking is predicted to further decline, as fewer youth are initiating use, and those commencing use are doing so in a comprehensive tobacco policy environment with strong anti-smoking social norms, and there is a high level of tobacco mortality in remaining 'hardened' groups (Edwards, 2020). This could even mean that some countries' ambitions for a 'smoke free generation' may be realised (Dyer, 2021).

In contrast, mortality and morbidity associated with those drugs contributing most to UK population prevalence is low (ONS, 2021a), and supply reduction and coercive and punitive interventions of the type which predominate in the UK appear to have had little effect on use (Babor, et al., 2018; H.M. Government, 2013; B. Hughes, Matias, & Griffiths, 2018). Perceived ease in obtaining drugs remains high and there is increasing acceptability of use in young people (NHS Digital, 2019; ONS, 2020). In this context, it is unclear what actions outlined in the Strategy could shift use downwards, and a floor effect may be evident.

The prevention paradox, whereby the highest risk of substance-related harm is situated at an individual-level in a small subgroup of the heaviest/frequent groups of people who use drugs, but the majority of substance use and burden of related problems at population-level come from low- and/or average-risk groups of PWUD because they are more numerous, appears to apply to adolescent cannabis use (Romelsjö, Danielsson, Wennberg, & Hibell, 2014; Stockwell, et al., 2004). If the paradox holds for other substances, then a focus on population level activities to prevent further increases in overall drug prevalence and targeted approaches to reduce harms in heavy/frequent groups of PWUD, may be an appropriate public health orientated approach to Strategy delivery. However, there is some evidence that illicit drug use in the UK has

become more concentrated ('hardened') in groups of young people who also report multiple vulnerabilities (Oldham, et al., 2021). As prevalence and modal frequency of drugs other than cannabis is low, investment in targeted activities may be more effective in reducing population level harms associated with other substances.

Thinking in the drug prevention field has also begun to move away from traditional manualised programmes and interventions (e.g. Burkhart, Tomczyk, Koning, and Brotherhood (2022)), and whilst these are still valuable tools in specific communities (e.g. schools, nightlife settings), in keeping with the wider public health field there are calls to embed prevention within a system perspectives (Hassmiller Lich, Frerichs, Fishbein, Bobashev, & Pentz, 2016). This includes development of system dynamics models that describe the interplay of multiple factors associated with drug use, and the effects of 'normalisation' of prevention practice across different professional cultures and environments (Fishbein, Ridenour, Stahl, & Sussman, 2016; Sloboda & David, 2021). This perspective requires learning and leadership to change attitudes, policies, and practice in ways that update conceptualisations of drug prevention. Strategy innovation funding that has been assigned to support the development of new interventions and detection technologies could be usefully allocated to applied research that seeks to understand how drug prevention activity could be embedded across diverse policy and practice areas. So rather than defining and evaluating prevention actions in relation to traditional programme classifications (e.g. school based) or outcomes (e.g. primary prevention, preventing initiation of drug use), prevention is assessed on the basis of its contribution to the overall reduction in drug related harm

Prevention infrastructure and systems in the UK are weak and require significant rebuilding

Previous iterations of the UK Drug Strategy in 2010 and 2017 included similar commitments to prevention (H.M. Government, 2010, 2017), but these were not delivered. There is currently no recognisable substance use prevention system in the UK (EMCDDA, 2019; UNODC, 2018), and it is difficult to see how current Strategy prevention priorities can be delivered without suitable structures being developed. Earlier national prevention guidance published by the National Institute for Health and Care Excellence (NICE, 2017) has not yet been implemented at scale, and few, if any, evidence-based prevention programmes are available outside of a small number of research trials (ACMD, 2015). Furthermore, in 2018 (latest data), only 62% of English school pupils recalled receiving drug education, and where this happened, it was typically in a single session (NHS Digital, 2019), counter to good practice (UNODC, 2018).

Although drug education was included as part of new statutory relationships, sex and health education curriculum introduced in 2020 (Department for Education, 2020a), delivery of this subject has been historically poor, with a loss of local authority support and expertise over the last decade (Ofsted, 2013). Associated teacher training guidance issued by the Department for Education is internally inconsistent, and prioritises ineffective approaches such as information provision and fear arousal, despite other materials warning against these types of activity (Department for Education, 2020b; Ruiter, Kessels, Peters, & Kok, 2014). In keeping with most European countries, there is no professional role of drug prevention practitioner in the UK, and relevant competencies are usually secondary to specialist treatment or other professional skills (including skills for commissioning) (Ostaszewski, et al., 2018; Sumnall, 2019). There is no recognised qualifying route into practice, so prevention is learned 'on the job' (Ostaszewski, et al., 2018). Whilst the Strategy includes a focus on rebuilding the size and skills of the treatment workforce, including within youth services, it is currently unclear whether this commitment extends to developing specific expertise around drug prevention activity. The UK's withdrawal from the European Union (EU) has made access to newly developed EUfunded professional training initiatives more difficult, but this provides

a model through which such work could proceed (Henriques, Burkhart, & Miovsky, 2020).

With respect to more targeted support, between 2013 and 2018 there was substantial disinvestment in early years programming and non-statutory services, and an average decrease of 28% in expenditure on young people's drug treatment services across English local authorities (Black, 2020). Prevention spending was cut to partly protect expenditure on specialist activities. Yet despite the rise in youth substance use across this period (ONS, 2020) and the relatively short time-lag between early onset of substance use and subsequent development of disorders (Behrendt, Wittchen, Hofler, Lieb, & Beesdo, 2009; Hines, et al., 2015), the number of young people accessing structured drug treatment also fell sharply (37.2% between 2015/16 and 2020/21), leading to increased unmet treatment demand (Office for Health Improvement and Disparities, 2022).

Research examining the impact of reductions in funding for local authority services more generally has found that this contributed to the widening of health inequalities (e.g. Alexiou, Mason, Fahy, Taylor-Robinson, and Barr (2021)), and an increase in indicators of vulnerability to substance use, such as children growing up in material poverty or being in state-care (Bennett, et al., 2020; Taylor-Robinson, Lai, Whitehead, & Barr, 2019). As riskier and more harmful profiles of substance use are socioeconomically patterned and more common in groups of young people experiencing other vulnerabilities such as childhood adversity, educational exclusion, mental ill health, or being in contact with the criminal justice system (e.g. De la Peña-Arteaga, Nogueira, Lynskey, and Hines (2021); Office for Health Improvement and Disparities (2022)), Strategy success is dependent on reversal of austerity, and related policies such as the cross-governmental 'levelling up' agenda (reduction of geographic socioeconomic and health inequalities), and new strategic priorities in (mental) health, criminal justice, and education (e.g.H.M. Government (2022); NHS England (2019)).

Innovation is welcomed, but shouldn't mean we ignore what we already know about what works, and what doesn't, in prevention

Focusing on specific Strategy actions to reduce demand for drugs and change attitudes to the acceptability of substance use, prevention is secondary to supply reduction, law enforcement, and treatment, but is justified on the basis of responses to the 'wrongs' of drug use (H.M. Government, 2021a, p. 47). Government previously stated its 'moral duty to do everything we can to tackle the impact of drug misuse' (H.M. Government, 2021b). Reference is made to key evidence-based prevention strategies such as school-based education, skills and resilience development, parenting interventions, and whole school approaches – all of which avoid simplistic moral framings of drug use (ACMD, 2015; Faggiano, Minozzi, Versino, & Buscemi, 2014; Faggiano, et al., 2008; Hickman, et al., 2014). Whilst these approaches have shown to be effective in research trials, effect sizes tend to be small and short-lasting compared to treatment interventions (e.g. Sandler, et al. (2014)), and as suggested above, implementation and up-scaling will be a challenging long-term activity that requires significant investment and capacity building (Chinman, et al., 2019; Fagan, et al., 2019).

For the first time in a UK Drugs Strategy there is recognition that whilst people 'put themselves at risk' of harm, drug use does not necessary cause harm to the majority of PWUD (pg 45). Hence there is also a focus on changing attitudes, through raising awareness of the 'wrongs' of drug use that result in harms to others. Action is therefore justified on the basis of societal harms (ACMD, 2020), including harms to others such as the impact of drug purchases on those adversely affected by the drugs trade, and in particular powder cocaine. The 'meaningful, fairer and tougher consequences' of use that are meant to drive attitudinal change are not specified (H.M. Government, 2021a, p. 6), but reference is made to communication campaigns, diversion into drugs awareness courses for possession offences, and escalating civil sanctions such as temporary removal of a passport or driving licence.

There is currently no clear evidence on the impact of these approaches as preventative measures (ACMD, 2015; Hughes, Stevens, Hulme, & Cassidy, 2018), but the Strategy provides a useful opportunity to develop the evidence-base through the announcement of a new innovation fund. Where civil sanctions have been introduced internationally, these have typically been used as alternatives to punishment, such as after decriminalisation of drug possession offences (EMCDDA, 2015). It is not clear whether civil sanctions will be applied as de facto decriminalisation measures in the UK, or applied in addition to punishments (including fines) already available under the Misuse of Drugs Act (1971). Several UK police forces already operate diversionary schemes for drugs offences that include drugs education components (Crest Advisory, 2022). However, educational interventions rarely change behaviour (Babor, et al., 2018), and they only capture a small proportion of PWUD. Hence, it may be more appropriate to consider them as a means to reduce the costs of prosecution, as screening opportunities for onward referral, or as minor punishments through the time commitment that some schemes require.

Designing effective drug prevention communication campaigns is difficult. There is some evidence that pro-drug attitudes predict current and future use (e.g. Hansen and Hansen (2016)), and that perceived negative subjective and injunctive social norms can encourage cessation (Schoenaker, Brennan, Wakefield, & Durkin, 2018). However, drug prevention communications have been extensively studied, and although they can strengthen anti-drug attitudes, this is typically in people who do not use drugs, and are rarely translated into behaviour change (Allara, Ferri, Bo, Gasparrini, & Faggiano, 2015; Stead, et al., 2019). Some approaches have been shown to have iatrogenic effects, which may be a result of reactance to perceived government restraints on personally-valued behaviour, or through inadvertently establishing favourable descriptive norms (Hornik & Jacobsohn, 2008).

Work in other fields suggest that successful communication campaigns may indirectly change behaviour by raising awareness of concurrently available services, rather than motivating change directly (Wakefield, Loken, & Hornik, 2010). Communicators must also be perceived to be credible by target audiences, but governmental organisations often struggle with establishing this characteristic, and in the drugs field are typically considered less trustworthy and less likely to provide accurate information compared with non-governmental and peerled sources (Falck, Carlson, Wang, & Siegal, 2004; Gamma, Jerome, Liechti, & Sumnall, 2005; Halpern & Pope, 2001). To overcome this, Strategy communication campaigns must be coordinated with community services that can provide intervention support, and be partnered with trusted non-governmental communicators. A challenge here will be the potential lack of alignment between the activities and ethos of community organisations (e.g. harm reduction), the primary objectives of the government campaign (i.e. primary prevention), and the loss of target audience perceptions of organisational independence and credibility that such a partnership may bring.

Effective communication campaigns also aim to control the content and amount of information available on a topic, and seek to frame the issue to make it more salient, attract attention, and suggest solutions (i.e. cessation/prevention) (Randolph & Viswanath, 2004). Strategy investment in new approaches designed to communicate harms of drug use to others seems to be developing along these lines. This is partly a response to significant policy focus on inner-city violence and exploitative supply models ('county lines') (National Crime Agency, 2018). Political and public discourse has held 'recreational' and affluent consumers of drugs responsible for these harms (Spicer, 2021) (e.g. "Middle-class drug users 'have blood on their hands'"; Simpson (2019)).

Leaving aside that many of these discussions have mischaracterised domestic powder cocaine markets (Black, 2020; Coomber & Moyle, 2017; Spicer, 2021), communications that focus on harms to others aim to stimulate negative self-sanctions (e.g., guilt) and wider social disapproval of use (i.e. negative social norms and moral disapproval). However, moral disengagement processes which allow individ-

uals to justify, rationalise, and absolve personal responsibility for harms may be important in determining campaign success (Bandura, 1991; Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001). Recent work suggests that people in the UK who use cocaine employ these processes when presented with information about the harms associated with the trade (Sumnall, Montgomery, Atkinson, Gage, & Boardley, 2021). Campaigns that focus on the 'wrongs' or moral aspects of drug use, particularly in relation to harms to others, are therefore likely to be ineffective, and may even be counterproductive by activating moral disengagement.

More generally, reviews of behaviour change interventions highlight that rather than punishment, effective approaches create enabling environments that motivate people to make changes, include activities that develop skills and build self-efficacy in relation to the recommended action, support opportunities for change, and include communication frames that highlight the gains in adopting the recommended behaviour rather than the losses incurred if not doing so, particularly when those consequences are perceived as having low personal relevance (e.g. harms of drug use to others) (Gallagher & Updegraff, 2012; Minian, et al., 2020).

Conclusion

In this commentary I have outlined some of the major challenges that I think policy-makers will face in achieving key Strategy aims through drug prevention work. Prevention is a minor component of the overall Strategy, with activity primarily focused on supply reduction, expanding pathways into treatment, and provision of specialised support to prevent development of more problematic patterns of use. However, a new and significant expansion of the focus of activity to include the general population of PWUD 'recreationally' and inclusion of a headline target of a 30-year low in drug prevalence can only be achieved through prevention work. Existing evidence-based programmes and interventions are unlikely to have the scale and impact required to achieve this, but natural cycles of drug use may partly lead to headline success regardless of this. New thinking about prevention is required that explicitly embeds prevention across multiple domains, and that specifically considers the aetiology of drug use and its multiple complex determinants. The Strategy supports opportunities for innovation, but this should not just be considered as the development of new interventions or communication campaigns, but also elaboration of the dynamic interactions of prevention activity within wider system understandings of health and wellbeing.

Declaration of Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- ACMD. (2015). Prevention of drug and alcohol dependence. London: Home Office.
- ACMD. (2020). Standard operating procedure for using evidence in ACMD reports. London, UK: Home Office.
- Alexiou, A., Mason, K., Fahy, K., Taylor-Robinson, D., & Barr, B. (2021). Assessing the impact of funding cuts to local housing services on drug and alcohol related mortality: A longitudinal study using area-level data in England. *International Journal of Housing Policy*, 1–19.
- Allara, E., Ferri, M., Bo, A., Gasparrini, A., & Faggiano, F. (2015). Are mass-media campaigns effective in preventing drug use? A Cochrane systematic review and meta-analysis. BMJ Open, 5, e007449.
- Anyanwu, P. E., Craig, P., Katikireddi, S. V., & Green, M. J. (2020). Impact of UK tobacco control policies on inequalities in youth smoking uptake: A natural experiment study. *Nicotine & Tobacco Research*, 22, 1973–1980.
- Babor, T. F., Caulkins, J. P., Fischer, B., Foxcroft, D. R., Humphreys, K., Medina, M. E., Obot, I. S., Rehm, J., Reuter, P., Room, R., Rossow, I., & Strang, J. (2018). Drug Policy and the Public Good.
- Bandura, A. (1991). Social cognitive theory of moral thought and action. (Eds.) W. M. Kurtines, & J. L. Gewirtz (Eds.), Handbook of moral behavior and development: Theory, research and applications. Erlbaum, Hillsdale, NJ: Psychology Press.

- Bandura, A., Caprara, G. V., Barbaranelli, C., Pastorelli, C., & Regalia, C. (2001). Sociocognitive self-regulatory mechanisms governing transgressive behavior. The Journal of Personality and Social Psychology, 80, 125.
- Behrendt, S., Wittchen, H. U., Hofler, M., Lieb, R., & Beesdo, K. (2009). Transitions from first substance use to substance use disorders in adolescence: Is early onset associated with a rapid escalation? *Drug and Alcohol Dependence*, 99, 68–78.
- Bennett, D. L., Mason, K. E., Schlüter, D. K., Wickham, S., Lai, E. T., Alexiou, A., Barr, B., & Taylor-Robinson, D. (2020). Trends in inequalities in children looked after in England between 2004 and 2019: A local area ecological analysis. *BMJ Open*, 10, Article e041774
- Black, C. (2020). Review of drugs: Phase one report. Evidence pack. London, UK: Home Office. Brotherhood, A., & Sumnall, H. R. (2011). Drug prevention quality standards. Luxembourg: Publications Office of the European Union.
- Burkhart, G., Tomczyk, S., Koning, I., & Brotherhood, A. (2022). Environmental prevention: Why do we need it now and how to advance it? *Journal of Prevention*, 43, 149–156.
- Caluzzi, G., Livingston, M., Holmes, J., MacLean, S., Lubman, D., Dietze, P., Vashishtha, R., Herring, R., & Pennay, A. (2022). Declining drinking among adolescents: Are we seeing a denormalisation of drinking and a normalisation of non-drinking? *Addiction*, 117, 1204–1212.
- Chinman, M., Acosta, J. D., Ebener, P. A., Hunter, S. B., Imm, P. S., & Wandersman, A. (2019). Dissemination of evidence-based prevention interventions and policies. In Z. Sloboda, H. Petras, E. B. Robertson, & R. Hingson (Eds.), Advances in prevention science: Prevention of substance use (pp. 367–383). Heidelberg, Germany: Springer.
- Chung-Hall, J., Craig, L., Gravely, S., Sansone, N., & Fong, G. T. (2019). Impact of the WHO FCTC over the first decade: A global evidence review prepared for the impact assessment expert group. *Tobacco Control*, 28, s119–s128.
- Coomber, R., & Moyle, L. (2017). The changing shape of street-level heroin and crack supply in England: Commuting, holidaying and cuckooing drug dealers across 'County Lines'. The British Journal of Criminology, 58, 1323–1342.
- Crest Advisory. (2022). Making the criminal justice system work better: How to improve outof-court disposals and diversion schemes. London: UK: Crest Advisory.
- De la Peña-Arteaga, V., Nogueira, S. O., Lynskey, M., & Hines, L. A. (2021). The relationship between childhood physical and sexual abuse and adolescent cannabis use: A systematic review. Frontiers in Psychiatry, 12, Article 631245 -631245.
- Department for Education. (2020a). *Relationships education, relationships and sex education* (RSE) and health education. London: UK: Department for Education.
- Department for Education. (2020b). *Teacher training: drugs, alcohol and tobacco* Retrieved 21/02/2022 from https://www.gov.uk/government/publications/teachertraining-drugs-alcohol-and-tobacco.
- Dyer, O. (2021). New Zealand plans to outlaw tobacco sales to citizens born after 2008. BMJ, 375, n3057.
- Edwards, R. (2020). Hardening is dead, long live softening; time to focus on reducing disparities in smoking. *Tobacco Control*, 29, 250–251.
- EMCDDA. (2015). Alternatives to punishment for drug-using offender. Luxembourg: European Union.
- EMCDDA. (2019). Drug prevention: Exploring a systems perspective. Luxembourg: Publications Office of the European Union Technical report.
- Fagan, A. A., Bumbarger, B. K., Barth, R. P., Bradshaw, C. P., Cooper, B. R., Supplee, L. H., & Walker, D. K. (2019). Scaling up evidence-based interventions in US public systems to prevent behavioral health problems: Challenges and opportunities. In *Prevention Science*: 20 (pp. 1147–1168).
- Faggiano, F., Minozzi, S., Versino, E., & Buscemi, D. (2014). Universal school-based prevention for illicit drug use. The Cochrane Database of Systematic Reviews, Article Cd003020.
- Faggiano, F., Vigna-Taglianti, F. D., Versino, E., Zambon, A., Borraccino, A., & Lemma, P. (2008). School-based prevention for illicit drugs use: A systematic review. Preventive Medicine, 46, 385–396.
- Falck, R. S., Carlson, R. G., Wang, J. C., & Siegal, H. A. (2004). Sources of information about MDMA (3,4-methylenedioxymethamphetamine): Perceived accuracy, importance, and implications for prevention among young adult users. *Drug and Alcohol Dependence*, 74, 45–54.
- Ferri, M., Dias, S., Bo, A., Ballotta, D., Simon, R., & Carrá, G. (2016). Quality assurance in drug demand reduction in European countries: An overview. *Drugs: Education, Pre*vention and Policy, 25(2), 1–7.
- Fishbein, D. H., Ridenour, T. A., Stahl, M., & Sussman, S. (2016). The full translational spectrum of prevention science: Facilitating the transfer of knowledge to practices and policies that prevent behavioral health problems. *Translational Behavioral Medicine*, 6, 5–16.
- Gallagher, K., & Updegraff, J. (2012). Health message framing effects on attitudes, intentions, and behavior: A meta-analytic review. Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine, 43, 101–116.
- Gamma, A., Jerome, L., Liechti, M. E., & Sumnall, H. R. (2005). Is ecstasy perceived to be safe? A critical survey. *Drug and Alcohol Dependence*, 77, 185–193.
- H.M. Government. (2010). 2010 drug strategy. London: H.M. Government.
- H.M. Government. (2013). An evaluation of the Government's drug strategy 2010. London, UK: Home Office.
- H.M. Government. (2017). 2017 drug strategy. London: H.M. Government.
- H.M. Government. (2021a). From harm to hope: A 10-year drugs plan to cut crime and save lives. London: H.M. Government.
- H.M. Government. (2021b). Government response to the independent review of drugs by Dame Carol Black. London: H.M. Government.
- H.M. Government. (2022). Build back better: Our plan for health and social care. London, UK: HM Government.
- Halpern, J. H., & Pope, H. G., Jr (2001). Hallucinogens on the internet: A vast new source of underground drug information. The American Journal of Psychiatry, 158, 481–483.

- Hansen, W. B., & Hansen, J. L. (2016). Using attitudes, age and gender to estimate an adolescent's substance use risk. *Journal of Children's Services*, 11, 244–260.
- Hargreaves, K., Amos, A., Highet, G., Martin, C., Platt, S., Ritchie, D., & White, M. (2010). The social context of change in tobacco consumption following the introduction of 'smokefree' England legislation: A qualitative, longitudinal study. Social Science & Medicine. 71. 459–466.
- Hassmiller Lich, K., Frerichs, L., Fishbein, D., Bobashev, G., & Pentz, M. A. (2016). Translating research into prevention of high-risk behaviors in the presence of complex systems: Definitions and systems frameworks. *Translational Behavioral Medicine*, 6, 17–31.
- Henriques, S., Burkhart, G., & Miovsky, M. (2020). The first university e-learning study programme based on the adaption of the EUPC: Portuguese implementation study. *Adiktologie*, 19, 35–41.
- Hickman, M., Caldwell, D. M., Busse, H., MacArthur, G., Faggiano, F., Foxcroft, D. R., Kaner, E. F. S., Macleod, J., Patton, G., White, J., & Campbell, R. (2014). Individual-, family-, and school-level interventions for preventing multiple risk behaviours relating to alcohol, tobacco and drug use in individuals aged 8 to 25 years. Cochrane Database of Systematic Reviews.
- Hines, L. A., Morley, K. I., Strang, J., Agrawal, A., Nelson, E. C., Statham, D., Martin, N. G., & Lynskey, M. T. (2015). The association between speed of transition from initiation to subsequent use of cannabis and later problematic cannabis use, abuse and dependence. Addiction, 110, 1311–1320.
- Holmes, J., Fairbrother, H., Livingston, M., Meier, P. S., Oldham, M., Pennay, A., & Whitaker, V. (2022). Youth drinking in decline: What are the implications for public health, public policy and public debate? *International Journal of Drug Policy*, 102, Article 103606.
- Hornik, R., & Jacobsohn, L. (2008). The best laid plans: Disappointments of the national youth anti-drug media campaign. *LDI Issue Brief*, 14, 1–4.
- Hughes, B., Matias, J., & Griffiths, P. (2018). Inconsistencies in the assumptions linking punitive sanctions and use of cannabis and new psychoactive substances in Europe. Addiction, 113, 2155–2157.
- Hughes, C., Stevens, A., Hulme, S., & Cassidy, R. (2018). Review of approaches taken in Ireland and in other jurisdictions to simple possession drug offences. UNSW Australia and University of Kent UK.
- Kelly, B. C. (2009). Smoke-free air policy: Subcultural shifts and secondary health effects among club-going young adults. Sociology of Health & Illness, 31, 569–582.
- Kraus, L., Room, R., Livingston, M., Pennay, A., Holmes, J., & Törrönen, J. (2019). Long waves of consumption or a unique social generation? Exploring recent declines in youth drinking. Addiction Research & Theory, 28, 183–193.
- Kuijpers, T. G., Willemsen, M. C., & Kunst, A. E. (2018). Public support for tobacco control policies: The role of the protection of children against tobacco. *Health Policy*, 122, 929–935.
- Minian, N., Corrin, T., Lingam, M., deRuiter, W. K., Rodak, T., Taylor, V. H., Manson, H., Dragonetti, R., Zawertailo, L., Melamed, O. C., Hahn, M., & Selby, P. (2020). Identifying contexts and mechanisms in multiple behavior change interventions affecting smoking cessation success: A rapid realist review. BMC Public Health, 20, 918.
- Mlinarić, M., Hoffmann, L., Kunst, A. E., Schreuders, M., Willemsen, M. C., Moor, I., & Richter, M. (2019). Explaining mechanisms that influence smoke-free implementation at the local level: A realist review of smoking bans. Nicotine & Tobacco Research: Official Journal of the Society for Research on Nicotine and Tobacco, 21, 1609–1620.
- Monaghan, M. (2012). The recent evolution of UK drug strategies: From maintenance to behaviour change? *People Place and Policy Online*, 6, 29–40.
- National Crime Agency. (2018). County lines drug supply, vulnerability and harm. London, UK: National Crime Agency.
- NHS Digital. (2019). Smoking, drinking and drug use among young people in England 2018. London: NHS Digital.
- NHS England. (2019). The NHS long term plan. London, England: NHS England.
- NICE. (2017). Drug misuse prevention: Targeted interventions. NICE guideline [NG64]. London: NICE.
- Office for Health Improvement and Disparities. (2022). Substance misuse treatment for young people: Statistics 2020 to 2021. London, UK: OHID.
- Ofsted. (2013). Not yet good enough: Personal, social, health and economic education in schools. Manchester, UK: Ofsted.
- Oldham, M., Livingston, M., Whitaker, V., Callinan, S., Fairbrother, H., Curtis, P., Meier, P., & Holmes, J. (2021). Trends in the psychosocial characteristics of 11–15-year-olds who still drink, smoke, take drugs and engage in poly-substance use in England. *Drug and Alcohol Review*, 40, 597–606.
- ONS. (2020). Drug misuse in England and Wales: Year ending March 2020. London, UK: Office for National Statistics.
- ONS. (2021a). Deaths related to drug poisoning in England and Wales: 2020 registrations. London: UK Statistics Authority.
- ONS. (2021b). Smoking prevalence in the UK. London: UK: Office for National Statistics.

- Opazo Breton, M., Gillespie, D., Pryce, R., Bogdanovica, I., Angus, C., Hernandez Alava, M., Brennan, A., & Britton, J. (2021). Understanding long-term trends in smoking in England, 1972–2019: An age–period–cohort approach. *Addiction* n/a.
- Ostaszewski, K., Ferić, M., Foxcroft, D., Košir, M., Kranzelic, V., Mihic, J., Novak, M., Pisarska, A., & Talic, S. (2018). European prevention workforce competences and training needs: An exploratory study. *Adiktologie*, *18*, 7–15.
- Pentz, M. A. (2000). Institutionalizing community-based prevention through policy change. *Journal of Community Psychology*, 28, 257–270.
- Randolph, W., & Viswanath, K. (2004). Lessons learned from public health mass media campaigns: Marketing health in a crowded media world. *Annual Review of Public Health*, 25, 419–437.
- Rehm, J., Babor, T., & Room, R. (2006). Education, persuasion and the reduction of alcohol-related harm: A reply to Craplet (2006). Addiction, 101, 452–453.
- Reuter, P., & Pollack, H. (2006). How much can treatment reduce national drug problems? Addiction, 101, 341–347.
- Romelsjö, A., Danielsson, A.-K., Wennberg, P., & Hibell, B. (2014). Cannabis use and drug related problems among adolescents in 27 European countries: The utility of the prevention paradox. *Nordic Studies on Alcohol and Drugs*, *31*, 359–370.
- Room, R., Greenfield, T. K., Holmes, J., Kraus, L., Livingston, M., Pennay, A., & Torronen, J. (2020). Supranational changes in drinking patterns: Factors in explanatory models of substantial and parallel social change. *Addiction Research & Theory*, 28, 467–473.
- Ruiter, R. A. C., Kessels, L. T. E., Peters, G.-J. Y., & Kok, G. (2014). Sixty years of fear appeal research: Current state of the evidence. *International Journal of Psychology*, 49, 63–70.
- Rutter, H., Savona, N., Glonti, K., Bibby, J., Cummins, S., Finegood, D. T., Greaves, F., Harper, L., Hawe, P., Moore, L., Petticrew, M., Rehfuess, E., Shiell, A., Thomas, J., & White, M. (2017). The need for a complex systems model of evidence for public health. *The Lancet*, 390, 2602–2604.
- Sandler, I., Wolchik, S. A., Cruden, G., Mahrer, N. E., Ahn, S., Brincks, A., & Brown, C. H. (2014). Overview of meta-analyses of the prevention of mental health, substance use, and conduct problems. The Annual Review of Clinical Psychology, 10, 243–273.
- Schoenaker, D. A. J. M., Brennan, E., Wakefield, M. A., & Durkin, S. J. (2018). Anti-smoking social norms are associated with increased cessation behaviours among lower and higher socioeconomic status smokers: A population-based cohort study. *PLoS ONE*, 13. Article e0208950.
- Simpson, J. (2019). Middle-class drug users 'have blood on their hands', says Cressida Dick. London, UK: The Times.
- Sloboda, Z., & David, S. B. (2021). Commentary on the culture of prevention. Prevention Science, 22, 84–90.
- Sloboda, Z., & Petras, H. (2014). Defining prevention science. New York: Springer.
- Spicer, J. (2021). Between gang talk and prohibition: The transfer of blame for county lines. *International Journal of Drug Policy*, 87, Article 102667.
- Stead, M., Angus, K., Langley, T., Katikireddi, S. V., Hinds, K., Hilton, S., Lewis, S., Thomas, J., Campbell, M., Young, B., & Bauld, L. (2019). Mass media to communicate public health messages in six health topic areas: A systematic review and other reviews of the evidence. Public Health Research. 7, 8.
- Stockwell, T., Toumbourou, J. W., Letcher, P., Smart, D., Sanson, A., & Bond, L. (2004). Risk and protection factors for different intensities of adolescent substance use: when does the prevention paradox apply? *Drug and Alcohol Review*, 23, 67–77.
- Sumnall, H. R. (2019). The substance-use prevention workforce: An international perspective. In Z. Sloboda, H. Petras, E. Robertson, & R. Hingson (Eds.), *Prevention of substance use* (pp. 395–412). Cham: Springer International Publishing.
- Sumnall, H. R., Montgomery, C., Atkinson, A. M., Gage, S. H., & Boardley, I. D. (2021). Moral disengagement and the harms of cocaine use. *Drugs: Education, Prevention and Policy*, 1–11.
- Taylor-Robinson, D. C., Lai, E. T., Whitehead, M., & Barr, B. (2019). Child health unravelling in UK. BMJ, 364, 1963.
- UNODC. (2018). International standards on drug use prevention (2nd ed.). Vienna, AT: UNODC.
- Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media campaigns to change health behaviour. Lancet, 376, 1261–1271 London, England.
- Warner, K. E., & Burns, D. M. (2003). Hardening and the hard-core smoker: Concepts, evidence, and implications. Nicotine & Tobacco Research: Official Journal of the Society for Research on Nicotine and Tobacco, 5, 37–48.
- Winstock, A., Eastwood, N., & Stevens, A. (2021). Another drug strategy for the UK. *BMJ*, 375, n3097.
- Wooding, D. (2021). DRUG CRACKDOWN: Boris Johnson unleashes all-out war on drugs to clean up Britain's crime-plagued streets. London, UK: The Sun.
- World Health Organization. (2017). Best buys and other recommended interventions for the prevention and control of noncommunicable diseases. GenevaSwitzerland: World Health Organization.