WHITE PAPER

PREVENTING YOUTH SUBSTANCE USE: WHAT THE LATEST RESEARCH DEMANDS OF POLICY, SCHOOLS, AND COMMUNITIES

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EXECUTIVE SUMMARY

Youth substance use is a preventable public health crisis that demands immediate,coordinated, and evidence-informed action. This White Paper synthesises three bodiesof recent research and expert commentary to construct a comprehensive picture ofwhere prevention science currently stands, where systems are failing, and what mustchange.

The evidence reviewed here spans three interconnected domains: the frontier ofadolescent neuroscience and recovery research (drawing on work led by Harvard's DrJohn F Kelly); the systemic collapse of opioid treatment infrastructure that makesprevention not merely preferable but logically necessary; and emerging school-basedprogramme evaluation from the United Kingdom that identifies, with unusual precision,what drug education must do to produce real-world change.

> *Prevention is not a consolation prize for a failing treatment system. It is the highest-value intervention available — and the evidence now tells us exactly how to do it.*

The findings converge on five urgent imperatives: rebuild the research community dedicated to adolescent substance use; reform diagnostic and clinical practices to fit the adolescent context; address the catastrophic treatment workforce shortage through preventive investment; deliver multi-session, skills-based school education grounded in behavioural science; and build recovery infrastructure before young people ever reach crisis point.

INTRODUCTION: A CRISIS HIDING IN PLAIN SIGHT

Two numbers define the scale of the problem. In the United States alone, more than 100,000 people die from opioid-related overdoses every year. Among 15-year-olds in England, 44 per cent have been offered drugs and nearly a quarter have used them. These figures represent the downstream consequences of inadequate prevention, the results of treating adolescent substance use as inevitable, marginal, or somebody else's problem.

The reality, confirmed by multiple research bodies, is that substance use disorder is neither inevitable nor untreatable. Historical evidence demonstrates that adolescent and young adult use rates were at their lowest in the period 1900 to 1950. The sharp rise that began in the 1960s reflects cultural, social, and environmental conditions — conditions that can, in principle, be shaped by deliberate policy and community action.

Yet the systems designed to address this problem are under severe and worsening strain. Treatment infrastructure in underserved communities is overwhelmed. The addiction counselling workforce is shrinking relative to demand. School drug education continues to be delivered inconsistently, often as a single session, and frequently without the skills-based content that research shows actually works. And the research community specifically focused on adolescent substance use has, over two decades, dispersed into other areas.

This White Paper argues that prevention is not simply the most compassionate response to this crisis. It is the most strategically rational one. When treatment systems cannot meet demand, and when early onset of substance use disorder is among the strongest predictors of lifelong harm, the economic, social, and public health logic for investing upstream is overwhelming.

SECTION 1: WHAT NEW RESEARCH TELLS US ABOUT YOUNG PEOPLE AND SUBSTANCE USE

1.1 The Research Field That Lost Its Way

In the 1990s and early 2000s, a cohort of scientists was actively developing validated assessment tools and age-specific treatments for adolescents with substance use disorders. Over time, many of those researchers moved into other areas, and the field lost momentum. The consequence is a significant evidence gap — a shortage of ageappropriate diagnostic frameworks, a paucity of rigorous evaluations of youth-specific interventions, and a treatment system that has defaulted to scaling down adult models rather than rethinking the problem from first principles.

Dr John F Kelly, founder of the Recovery Research Institute and the National Center on Youth Prevention, Treatment, and Recovery at Massachusetts General Hospital, has identified this dispersal as a primary structural problem. His response was to establish a dedicated national centre and to convene three national conferences in Baltimore to rebuild the community of scientists, clinicians, and policymakers working in this space. The field, he argues, needs regeneration — not incremental growth, but a fundamental reinvestment in the science of adolescent substance use.

1.2 The Changing Drug Landscape: High-Potency Cannabis, Polysubstance Use, and Screen Time

The substance environment facing young people today is qualitatively different from the one that generated most of the foundational research in this field. Three emerging risks are of particular concern.

First, high-potency cannabis. THC concentrations have quadrupled since the 1970s and 1980s. The product widely available to young people today is not the substance studied in decades of earlier research. Higher THC exposure at younger ages carries documented risks for addiction and for epigenetic effects that may activate genes linked to psychosis and anxiety disorders. Psychiatric admissions connected to adolescent cannabis use are rising across multiple countries, a pattern that clinicians are increasingly tracking.

Second, polysubstance use. Vaping, alcohol, synthesised compounds, and high-potency cannabis are often used in combination, making clinical

assessment substantially more complex than single-substance presentations. Any serious prevention approach must account for this complexity in both screening tools and intervention design.

Third, heavy screen time and social media exposure during childhood. While the science here is still developing, the potential interaction between intensive digital engagement during sensitive developmental windows and later substance use risk is a serious open question that prevention researchers must engage with.

1.3 The Diagnostic Problem: Criteria Designed for Adults

One of the most consequential but least-discussed problems in adolescent substance use care is the mismatch between existing diagnostic criteria and the adolescent experience. The criteria currently used to identify substance use disorder were developed primarily from research with middle-aged adults presenting with severe alcohol dependence.

> *You cannot ask a 16-year-old how it affects their mortgage payment. They simply do not know what you are talking about. — Dr John F Kelly, Massachusetts General Hospital*

This mismatch distorts clinical pictures and can produce inaccurate diagnoses. When clinicians apply adult criteria to adolescent presentations, they risk both over-diagnosis (pathologising age-normative experimentation) and under-diagnosis (missing genuine disorder because the relevant consequences appear different in young people). The field needs adolescent-specific diagnostic frameworks — built from adolescent research, not retrofitted from adult data.

1.4 The Medications Gap

Approved pharmacotherapies for opioid use disorder — including buprenorphine and naloxone — are available for young people aged 16 and over who meet clinical criteria. Yet research suggests that only 15 to 20 per cent of adults who qualify for opioid medications actually receive them. The situation is even more acute for alcohol use disorder, a condition that causes higher absolute mortality than opioid disorders but receives even less pharmacological treatment.

Barriers include patient reluctance, clinician resistance rooted in ideological rather than evidential objections to agonist-based therapies, and structural deficits in training and supervision. This is one of the clearest failures in the current system: effective treatments exist, are approved, and are not being used.

1.5 Dismantling the Inevitability Myth

Perhaps the most consequential misconception in the field is the belief that youth substance use is a rite of passage — that it will happen regardless of what adults do, and that prevention investment therefore represents a low-value activity. This belief is demonstrably false.

Historical data shows that adolescent and young adult substance use rates were at their lowest during the first half of the twentieth century. The surge that began in the 1960s reflects societal conditions, not immutable biology. The implication is important: those conditions can be changed. Prevention investment is not futile; it is, on the historical evidence, effective when it is sustained.

The inevitability myth also discourages family action. Research shows that parents carry significant protective influence over their children's likelihood of using substances. Every message that normalises youth use or frames it as unstoppable undermines that influence and weakens the political will for preventive investment.

1.6 Recovery Support: The Most Underbuilt Part of the System

Recovery support services for young people represent the largest gap in the current system. Prevention research and acute treatment have both seen genuine progress over recent decades. Recovery support has not. Adolescent recovery must account for very different life circumstances than adult recovery: school attendance, family dependency, peer relationships, and developmental social milestones all shape what is useful.

Community activities and recreational programmes that offer genuine alternatives to substance-using social environments matter greatly at this stage. Yet relatively few such programmes have been rigorously evaluated for this age group. The field needs both to build these services and to test them with the methodological rigour that determines whether they work and for whom.

SECTION 2: THE TREATMENT SYSTEM CRISIS AND THE PREVENTION IMPERATIVE

2.1 The Scale of the Opioid Crisis

Opioid use disorder is the most acute and visible dimension of the youth substance use problem in North America. Opioid-related overdose deaths in the United States more than doubled between 2015 and 2021, reaching over 107,000 annually. These deaths are not distributed randomly: they fall disproportionately on communities already experiencing poverty, social fragmentation, and inadequate healthcare access.

A 2024 study published in JAMA Network Open provides one of the most detailed pictures yet of how the healthcare system is responding to this demand — and where it is failing. Drawing on data from more than 7,800 clinicians working in underserved communities across the United States, the study reveals a system operating at the limits of its capacity.

2.2 A System at Its Limits

Nearly 68 per cent of clinicians surveyed reported limited treatment resources as a significant barrier to providing adequate opioid use disorder care. Among those working in rural settings, the figure climbed to 74 per cent. Almost half of all healthcare sites identified a shortage of trained staff as their greatest operational challenge.

The workforce situation is deteriorating. The Health Resources and Services Administration reported that demand for behavioural health clinicians grew by 8 per cent between 2021 and the time of the study, while supply dropped by 2 per cent over the same period. The gap is widening, not closing.

> *Among clinicians who identified limited care access as a barrier, over 70 per cent pointed to a shortage of addiction counselling as the core gap. The counselling and mental health services in shortest supply are the same ones most needed to reach people before dependency takes hold.*

One in four clinicians who were eligible to provide opioid use disorder care but were not doing so reported lacking adequate supervision, mentorship, or peer consultation. More than a quarter pointed to organisational barriers within their own workplaces. These are not clinicians who lack commitment; they are clinicians working in systems that do not support them.

2.3 Rural Communities: Where Risk Is Highest and Resources Are Lowest

Rural areas carry a disproportionate share of the opioid crisis burden, and the healthcare infrastructure available to them is consistently weaker than in urban settings. Rural clinicians reported higher rates of resource scarcity, greater difficulty accessing specialist care, and more severe staff shortages. This is the inverse of what a well-designed system would deliver: the communities with the greatest vulnerability arethe ones receiving the least support.

Rural populations face elevated rates of social isolation, economic disadvantage, and geographic barriers to care. These are established risk factors for substance use disorder onset. A prevention framework for rural communities must therefore begin with investment in the social determinants of health: youth programmes, community mental health infrastructure, and support networks that build resilience before clinical
intervention becomes necessary.

2.4 Prevention as a Logical Necessity

The implications of this picture are straightforward. When treatment systems are operating at or beyond capacity, when workforce shortages are worsening, and when demand is rising — the most rational strategy is to invest in preventing people from reaching crisis point in the first place. This is not idealism; it is pragmatics.

The JAMA research does record genuine progress: more people in underserved communities are receiving opioid use disorder care than a decade ago. But that progress exists within a fundamentally strained system, and it does not address the upstream conditions that drive opioid dependency. Treating the crisis at scale, with the full support that recovery requires, remains beyond what the current system canconsistently deliver. Prevention is not a fallback; it is the primary intervention.

SECTION 3: DRUG EDUCATION IN SCHOOLS — WHAT ACTUALLY WORKS

3.1 The Evidence Base for School Prevention

Schools are the primary institutional setting in which young people can be reached before substance use begins. They are also settings in which previous drug education has frequently failed. The dominant model for decades has been information-delivery: tell young people which drugs do what, and trust that knowledge will change behaviour. The evidence that this approach works is weak. The evidence that it is insufficient is extensive.

A 2026 study published in the journal Drugs: Education, Prevention and Policy offers a detailed evaluation of a different approach: the RISUP programme (Reducing Illicit Substance Use Project), developed and piloted by researchers from the Universities of Leeds and Huddersfield and tested in three secondary schools in Kirklees, England. The programme reached approximately 700 Year 7 pupils aged 11 to 12. Its design is grounded in the COM-B framework — Capability, Opportunity, Motivation, Behaviour — a well-validated model from behavioural science that identifies the drivers of behaviour change.

3.2 The Context: Gaps in Current Delivery

The scale of the delivery problem is visible in the baseline data. A 2023 NHS survey found that 44 per cent of 15-year-olds in England had been offered drugs and 23 per cent had used them. Treatment referrals for ketamine and nitrous oxide among young people are rising. Social media has extended peer influence well beyond the school gates, reaching young people at hours and in spaces where adult guidance is absent.

Drug and alcohol education became a statutory requirement in UK schools under the 2020 Relationships, Sex and Health Education guidance. Yet delivery remains inconsistent. Only 62 per cent of English school pupils could recall receiving any drug education at all in a pre-statutory survey, and the majority described a single standalonesession. A single session is not an intervention; it is theatre.

3.3 What the RISUP Evaluation Found

The RISUP programme delivered six one-hour sessions covering: normative beliefs and peer influence; coping strategies; communication skills; decision-making; goal setting; and taking control of one's own narrative. Each session fitted within the school's existing Personal, Social, Health and Economic (PSHE) timetable and required no specialist training or additional resources beyond the materials provided.

Student responses were strikingly positive. Pupils consistently reported that interactive, movement-based, and creative activities helped them retain content far more effectively than passive instruction. Role-playing, group discussion, and postermaking were identified as particularly effective. Pupils also began applying the skills they had developed to broader peer relationship challenges, demonstrating transfer of learning beyond the specific drug education context.

> *Students described the sessions as 'life lessons' — applying the assertiveness, decision-making, and peer pressure resistance skills they had developed not just to drug situations but to everyday social challenges*

Teachers observed similar patterns. Many pupils began applying what they had learnt to peer dynamics more broadly, with some articulating new frameworks for evaluating the quality of their friendships.

3.4 The Implementation Challenges

The RISUP evaluation was candid about implementation difficulties, and this candour is itself valuable. The most significant challenge was a mismatch between the programme's pedagogical demands and some teachers' habitual approaches. In schools where PSHE had traditionally followed a more academic, written-work format, teachers found the volume of discussion and interactive activity uncomfortable.

Non-specialist teachers faced particular pressure. Delivering drug prevention on top of a primary subject, with limited preparation time, made engagement with podcast guidance and pre-lesson planning difficult. Some teachers felt that the balance between skills-building and drug-specific factual content had swung too far toward the former.

Physical space created additional barriers. Some classrooms were too small for movement-based activities, requiring teachers to improvise with substitute exercises. And several pupils — particularly those from minority religious and cultural backgrounds — found that some scenarios did not feel personally relevant.

3.5 What Effective School Drug Prevention Requires

Drawing on the RISUP findings alongside the broader evidence base, effective school drug prevention programmes must satisfy several conditions:

- Multi-session delivery. A single session is not sufficient. Behaviour change requires repeated exposure, skill practice, and reinforcement over time. Six sessions represents a minimum, not a maximum.
- Skills-based content grounded in behavioural science. Information about drugs is not sufficient. Young people need rehearsed capabilities in peer pressure resistance, decision-making under social stress, and long-term thinking. The COM-B framework offers a validated structure for this.
- Active, participatory pedagogy. Passive instruction does not produce retained knowledge or changed behaviour. Interactive activities, small-group discussion, role-play, and creative tasks are not pedagogical luxuries; they are delivery mechanisms for effective prevention.
- Self-contained teacher materials. In a context where non-specialist teachers are expected to deliver prevention education as part of a broader PSHE role, all guidance must be embedded in the slide deck. Teachers should not need to engage with additional materials to deliver confidently.
- Cultural and contextual inclusivity. Scenarios and examples must reflect the diversity of the young people in the room. A programme that feels irrelevant to some students will not change their behaviour.
- Iterative piloting and refinement. Implementation challenges only become visible in real classrooms. A development cycle that includes genuine piloting, teacher feedback, and material revision before wider rollout is essential.

The RISUP programme also arrives at a significant policy moment. From September 2026, updated UK statutory RSHE guidance explicitly requires schools to develop student attributes and skills alongside factual knowledge — a shift that aligns preciselywith the approach the RISUP team had already built.

SECTION 4: SCREENING, EARLY INTERVENTION, AND THE DEVELOPMENTAL WINDOW

One of the clearest and most actionable findings from the research reviewed here concerns the timing of intervention. The critical window for onset of substance use disorder falls roughly between ages 15 and 25. Early onset within this window is among the strongest known predictors of more severe and more prolonged disorder. The logic of cancer screening applies directly: public health systems should screen at the ages when risk is known to peak.

Yet systematic screening for substance use risk among adolescents is not standard practice in most healthcare or school health systems. Primary care visits, school health assessments, and routine paediatric care represent missed opportunities to identify young people at elevated risk and to intervene before dependency develops.

> *The critical window for substance use disorder onset falls between 15 and 25. If we screen for cardiovascular risk at the ages when risk peaks, we should screen for substance use disorder in the same way. The logic is identical and the evidence is equally strong.*

Early intervention in this window does not necessarily mean formal treatment. It may mean connecting young people with counselling services, providing information and skills tools, adjusting social environments, and mobilising family and community resources. The evidence for brief intervention approaches in this age group is growing. What it requires is a system that identifies young people before crisis rather than after.

SECTION 5: POLICY RECOMMENDATIONS

The evidence reviewed in this White Paper supports a structured, multi-sector response. The following table summarises the priority domains, key actions, and the actors best positioned to lead each.

Priority	Key Action	Actors
Research Regeneration	Fund a dedicated national centre for adolescent substance use research; attract next-generation scientists into the field	Government, universities, research councils
Diagnostic Reform	Develop and validate adolescent-specific diagnostic criteria for substance use disorder	Clinical bodies, DSM/ICD committees
Workforce Capacity	Expand addiction counselling supply and address rural shortages through targeted scholarships and telehealth models	Health departments, training institutions
School Prevention	Scale evidence-based skills programmes (e.g. RISUP) within statutory RSHE curricula; mandate multi-session delivery	Departments of Education, school leaders
Earl Screening	Institute universal screening for substance use risk between ages 15 and 25 across primary and school health settings	Clinicians, school nurses, GPs/paediatricians
Recovery Infrastructure	Build and rigorously evaluate youth-specific recovery support services: community activities, peer mentoring, digital platforms	Community organisations, commissioners
Family & Community	Empower parents with evidence-based guidance; invest in social infrastructure in high-risk communities	Families, local government, NGOs
Medication Access	Close the treatment gap for approved pharmacotherapies; address clinician stigma through mandatory training	Prescribers, medical schools, regulators

These recommendations are not independent; they form a system. Investment in schoolbased prevention without corresponding investment in recovery support creates a gap in the continuum. Workforce expansion without diagnostic reform means more clinicians applying inadequate frameworks. Research regeneration without translation infrastructure means new findings that do not reach practice. The recommendations must be pursued in combination.

CONCLUSION: THE PREVENTION IMPERATIVE

The research synthesised in this White Paper does not make comfortable reading. It reveals a field that lost momentum, a treatment system in genuine crisis, and a set of educational practices that have too often prioritised compliance over impact. But it also reveals something important: the evidence is now sufficiently clear and sufficiently specific that the path forward is visible.

We know that high-potency cannabis, polysubstance use, and social media exposure constitute a changed risk environment requiring updated prevention approaches. We know that diagnostic criteria designed for middle-aged adults are distorting clinicalcare for adolescents. We know that treatment workforce shortages are worsening faster than supply is growing, making prevention not an aspiration but a necessity. We know that skills-based, multi-session school programmes grounded in behavioural science work better than single-session information delivery. And we know that the critical developmental window between 15 and 25 is not being systematically used for screening and early intervention.

The inevitability myth must be retired. Substance use among young people is not a rite of passage. It is not unstoppable. It is a preventable public health outcome, and the evidence tells us how to prevent it. What remains is the political will to invest accordingly.

> *The most powerful investment any community, school system, or government can make is in prevention before crisis arrives. The researchnow tells us what that investment should look like. The decision to make it is ours.*

SOURCES AND REFERENCES

This White Paper synthesises and draws upon the following primary sources:

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