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Victoria Leigh

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Applying the lessons of VSA to new psychoactive substances

Victoria Leigh

Victoria Leigh is a Project Lead at the Re-Solv, Stone, UK.

Abstract

Purpose – *The purpose of this paper is to explore whether there are ways in which the preventive strategies used to tackle volatile substance abuse (VSA) can be usefully applied to today's new psychoactive substances (NPS).*

Design/methodology/approach – *In 2010-2013, with funding from the Big Lottery, Re-Solv, in partnership with St George's, University of London, and educari, commissioned a re-analysis of both the mortality data relating to VSA and of the legislative and preventative measures taken that may have played a part in the steady downward trend in VSA mortality since. This paper is informed by Re-Solv's research findings and the papers resulting from it, namely, Ives (2013) and Butland et al. (2013).*

Findings – *Efforts to reduce the harm from NPS could benefit from a re-examination of preventive approaches to VSA, which have resulted in a downward trend in mortality over the past two decades.*

Social implications – *There is evidence from past prevention practice which could be relevant and applied to present day concerns about drugs and substances not previously available or used.*

Originality/value – *This is the first paper to explore how learning from VSA might be applied to NPS and the "legal highs" of today.*

Keywords *Inhalant abuse, Legal highs, New psychoactive substances (NPS), Solvent abuse, Substance misuse prevention, Volatile substance abuse (VSA)*

Paper type *Technical paper*

Introduction

30 years ago, the media was alive with lurid tales of legal high use among "youngsters who dice with death". In the late 1980s and early 1990s, solvent and volatile substance abuse (VSA) was killing up to 150 people a year in the UK, 60 per cent of them under the age of 18 (Taylor *et al.*, 1993). Levels of experimentation among 11-15 year-olds were higher here than anywhere else in Europe (Hibell *et al.*, 1997).

The focus of public and political attention has long moved on from VSA. But three decades later the same sensational headlines – "Legal highs destroying young people" (*Derry Journal*, 2014) – leap from our digital and print news pages. The Centre for Social Justice claims that legal high deaths have increased eightfold in three years, and there are "distinct echoes of the glue sniffing epidemic of the 1980s" (DrugScope, 2014a, p. 8) in the possible profile of vulnerable young people involved.

The charity, Re-Solv, was founded in 1984, initially to tackle "glue sniffing" and then with the broader remit of working to prevent all forms of VSA. Today, VSA mortality has fallen by two-thirds and the proportion of deaths among young people has fallen from almost 60 per cent in the early 1980s to 18 per cent today. The initial premise for this practitioner paper was whether strategies adopted to tackle the misuse of accessible, high street products associated with VSA

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could be applied to today's legally available new psychoactive substances (NPS). Subsequently, the government's NPS bill has pulled the carpet from under such a comparison since the proposed legislation, as announced in the Queen's Speech on May 27 this year, intends to "ban the new generation of psychoactive drugs". In direct contrast to the New Zealand Government's move to "create the first new legal drug sector […] since the establishment of the alcohol and tobacco industries", other than specified exemptions, there are to be no more "legal highs" in the UK.

Despite this, a historical examination of VSA may still shed some useful points of light around prevention practices. Since there was little that could be done about the supply of products associated with VSA, Re-Solv's learning is largely based on thirty years' experience of trying to manage demand. A blanket ban on NPS in the UK may make them illegal to produce, sell, supply or possess to supply but will not make them inaccessible or illegal to use.

In 2010-2013, with funding from the Big Lottery, Re-Solv commissioned a re-analysis both of the mortality data relating to VSA and of the legislative and preventative measures taken that may have played a part in the steady downward trend in VSA mortality since. This practitioner paper is based largely on two reports into the findings of this research: the first by Ives (2013) "Investigating VSA: report on research undertaken by *educari* for Re-Solv under the Big Lottery Fund Research Programme" and, second, Butland *et al.* (2013) "Twenty-five years of volatile substance abuse mortality: a national mortality surveillance programme" published in *Addiction*.

VSA: the historical perspective

These original "legal highs" were not "drugs" at all; they were everyday consumer products with legitimate household and commercial uses – primarily glue, petrol and butane gas from aerosols and cigarette lighter refills. But, as is currently the case with today's "research chemicals", volatile substances were freely available on the high street, they were cheap and they were legal to purchase and possess. These factors may also have given rise to the misconception that volatile substances were "safer" than illegal drugs, as some consider to be the case for attitudes towards NPS today.

As well as the number of deaths, the other shock factor was the age of those dying. VSA was killing children. While prevalence for NPS is described by the NPS Review Expert Panel as being "higher among young adults" (p. 11), prevalence for VSA was among younger children and this was reflected in the mortality statistics. Even by the period 2000-2008, VSA was still killing more under-15s than all illegal drugs combined (Ghodse *et al.*, 2012, p. 8).

Unlike NPS, there was never any argument about the mortality rates directly associated with VSA. From 1984-2009 successive governments commissioned the annual *Trends in UK deaths associated with abuse of volatile substances* report from St George's, University of London that not only took into account data from death certificates (as does the Office for National Statistics report today) but, critically, also required the collation and analysis of Coroners' reports. The remit was clear: every death which would not have occurred had the volatile substance not been inhaled was recorded and published.

In summary, the accessibility of the "drugs", the deaths directly associated with their use, and the age of those dying were clear drivers for action. The combined interests of government, the product manufacturers, those working in the substance misuse field and, critically, communities who had experienced the shock of a death, led to a range of pragmatic responses from product manufacturers and broader legislative, educational and preventative measures from government and third sector organisations such as Re-Solv.

Data

For VSA, compelling mortality data drove evidence-based thinking on how best to approach the problem and continued to keep VSA on the policy agenda for more than 25 years. However, funding cuts, the (positive) downward trend in VSA mortality and a focus on other emerging drugs are among the challenges Re-Solv faces in continuing to monitor trends in both mortality and prevalence. Some of these challenges also have relevance to the collation of accurate data on NPS.

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Prevalence

Just as for NPS, adult prevalence data for VSA was primarily drawn from the British Crime Survey (now the Crime Survey of England and Wales, CSEW). However, in 2011, questions on the use of “glues, solvents, gas or aerosols” were removed in favour of questions about recently classified drugs. There is now, therefore, a significant hole in the prevalence data available on VSA. The fact that, as for VSA, “use of [NPS] is lower than more established drugs such as cannabis, powder cocaine, and alcohol” (Public Health England (PHE), 2014a, b, p. 5) begs the question as to what long-term commitment there is to continued data collection on NPS and what rationale will determine which individual substances, or types of substance, continue to be tracked. This is perhaps even more critical for NPS where “use is higher in some subgroups, such as clubbers and men who have sex with men” (PHE, as above), i.e. young adults and adults, than for VSA where the critical subgroup is still children – and therefore outside the CSEW remit.

Among children and young people, prevalence data for “volatile substances such as gas, glue, aerosols and other solvents” is provided by the annual Health and Social Care Information Centre (HSCIC, 2015) report, “Smoking, drinking and drug use among young people in England”. Mephedrone has been included in the report since 2012 and “new questions about legal highs were added to the 2014 questionnaire. The question referred to ‘new substances that have the same effects as drugs like cannabis, ecstasy or cocaine. These are sometimes called legal highs and can come in different forms, such as herbal mixtures, powders, crystals or tablets’”.

Aside from the generic questions, “are pupils honest?” and “are pupils accurate?” that the authors address within the report, pupils’ understanding and interpretation of “legal highs” will clearly be subjective, even with the careful definition provided. There may also be confusion over categorisation; it is likely, for example, that some pupils will categorise nitrous oxide as a “legal high” rather than a “gas”. There is also the issue of recanting. Evidence from the VSA data, for example, suggests that younger children are inclined to interpret the question “Have you ever tried sniffing glue, gas, aerosols or solvents (even if only once)?” in a fairly broad fashion (so that they count things like experimentally sniffing the glue in the art class) whereas older children are probably more likely to realise that the question is asking about use with the intention of getting high. While this may be a problem particularly associated with VSA (Martino *et al.*, 2009), Johnston and O’Malley note in “The recanting of earlier reported drug use by young adults” that recanting rates were more substantial for psychotherapeutic drugs “possibly because of their greater definitional ambiguity” – an ambiguity that certainly applies to “legal highs”, notwithstanding the best attempts to define these “herbal mixtures, powders”, etc., for pupils.

Despite these reservations, it is an interesting and useful step to begin to be able to view this comparable data on NPS. While VSA continues to be the most common form of substance misuse among younger children (11-13 years old), of children aged 11-15 who reported drug use in the last year, 6.7 per cent reported taking cannabis, 2.9 per cent reported inhaling glue, gas, aerosols or solvents, 2.0 per cent reported taking legal highs and 0.5 per cent of pupils reported having used mephedrone (HSCIC, 2015).

For both VSA and NPS there is also a growing awareness of chronic, rather than experimental or recreational, use, particularly among adults. In its street drug survey, DrugScope (2014b) found “virtually every area reporting a continued rise in [NPS] use by a varied population. Of most concern was the rapid rise in use of synthetic cannabinoids […] by opiate users, the street homeless, socially excluded teenagers and by people in prison” (p. 3). For VSA, evidence suggesting this type of chronic use is coming from mortality, rather than prevalence, data. Butland *et al.* (2013) have shown that the proportion of adult deaths (aged 20 years and over) has increased significantly over the past decade; that the age of death has risen from an average of 15 years old between 1990-1999 to 30 years today; and that the number of women (aged 18 and over) dying of VSA, increased from six in the period 1983-1987 to 45 in 2003-2007.

Mortality

Statutory funding for the annual *Trends in UK deaths associated with abuse of volatile substances* reports by St George’s, University of London, meant that data collation methods could be tailored to suit this very specific form of substance misuse. A national programme that

asked Coroners to directly report deaths caused by VSA was introduced, meaning that VSA deaths attributed to "accident" or "misadventure" (which would fall outside the International Classification of Diseases (ICD) range for "drug-related deaths") could now be included in the mortality figures.

Today, the St George's report is no longer statutorily funded. Since 2010, officially published figures for VSA have been solely provided by the ONS drawing on data from ICD codes alone. The Table I illustrates the difference in VSA mortality figures depending on which form of data collation is used.

As Stephen Penneck, Director General of the ONS explained in response to a parliamentary question: "It is important to note that the figures presented [by the ONS] are not the total number of deaths involving volatile substances […] Deaths associated with volatile substance abuse are under-reported in official statistics based on death registration data" (Hansard, 2011).

Bearing in mind the different figures recorded for NPS deaths in 2012 (68 by the National Programme on Substance Abuse Deaths and 52 by the Office for National Statistics, both of which were subsequently called into question by the Independent Scientific Committee on Drugs in *The Lancet* (King and Nutt, 2014)), this crisis in the definition and collation of VSA mortality data has a cautionary relevance for NPS data-gathering and reporting.

Treatment

In recent years, the cohort of VS-users has grown older and yet figures for those in treatment and recovery services for VSA remain strikingly low. Re-Solv has identified a number of key issues, all of which have relevance for NPS.

Since VSA had historically been regarded primarily as a young people's problem, support and treatment services for adult VS-users were not so well established as for the use of other, illicit drugs. Re-Solv and *educari*'s, 2009 research, "Tackling VSA more effectively by meeting professionals" needs' found that where practitioners were already working with VS-users, they appeared to be doing so confidently, and in a supportive institutional context. "But professional workers were aware that they might be missing many cases of VSA" not solely, but significantly "because the issue is not given priority by commissioners […] A reason why commissioners do not commission services is that they do not know what effective practice with VS misusers should be" (p. 138). It is positive to see this problem for NPS being directly addressed already by publications such as PHE's (2014b) "toolkit for substance misuse commissioners" and, for those working with young people, the Home Office's (2015) "Resource pack for informal educators and practitioners". For VSA, funded national training programmes, free at the point of delivery, have also proved effective in raising practitioner skills and confidence.

However, practitioner feedback from Re-Solv's current training programme (funded by a Department of Health Innovation, Excellence and Strategic Development Fund grant) has identified a further problem: 52 per cent of practitioners trained in the first two years of the programme replied "no" or "unsure" in answer to the question: "Does your service routinely assess for VSA?" It would be interesting to ask the question: "Does your service routinely assess for NPS?" Because if practitioners are either not assessing for VSA/NPS or are not provided with assessment criteria that enables them to record information on VSA/NPS, it cannot be expected that accurate treatment statistics will reach PHE's National Drug Treatment Monitoring System.

Finally, there may be a language difficulty in even asking about VSA and NPS. As Kevin Flemen (2014) pointed out in his article "Semantic Challenge" for *Drink and Drugs News*: "The term has

Table I Comparison of VSA-related deaths in England recorded by ONS and by the St George's study

Year	*00*	*01*	*02*	*03*	*04*	*05*	*06*	*07*	*08*	*09*	*Total*
ONS (data drawn from death certificates)	24	36	45	24	32	27	20	22	17	19	541
St George's (data drawn from death certificates and Coroners' reports)	52	49	51	42	41	36	34	44	29	25	820
Percentage (ONS of St G's)	46	73	88	57	78	75	59	50	59	76	66

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little or no relevance to end users. A resource, service or awareness session referring to NPCs [new psychoactive compounds] will not register with key target groups. Asking people, "what NPCs have you used in the last month?" won't elicit the information that I am looking for. It's akin to when the language switched from talking about 'glue sniffing' to 'volatile substance abuse' The language may be more accurate, but what it gains in accuracy it loses in comprehension".

Public strategies to tackle VSA

Although the same products – aerosols, cigarette lighter refills, glues, etc., – remain available in all our homes and high streets, VSA mortality (according to the St George's figures) has fallen by two-thirds and the proportion of deaths among young people has fallen from almost 60 per cent in the early 1980s to 18 per cent today. No one strategy has been responsible for achieving this and, as the Advisory Council on the Misuse of Drugs (1995) report on VSA stressed: "it must be evident that 'good practice' will constitute a layered series of alternative or multiple strategies rather than any one master stroke" (para 5.5).

Legislation

Two key pieces of legislation came about as a result of the VSA epidemic: the Intoxicating Substances (Supply) Act (1985) and The Cigarette Lighter Refill (Safety) Regulations (1999). The latter made it illegal to supply cigarette lighter refills containing butane to anyone under the age of 18. Restricting the sale of the product was clearly a positive step as part of a raft of supportive measures but Butland *et al.* (2013) "found no evidence of a fall in total VSA deaths in either boys or girls" (p. 391) following the legislation. It remains the case that over half (52 per cent between 2000 and 2009) of under-18s dying of VSA continue to die from age-restricted butane products and Re-Solv continues to be a strong advocate for regular test-purchasing operations by local Trading Standards.

The Intoxicating Substances (Supply) Act (1985) is of more interest in the context of this paper, as it is directly applicable to the sale of NPS to under-18s. The Act made it illegal in England, Wales and Northern Ireland for a person to sell or supply a substance to anyone believed to be under the age of 18 or anyone acting on behalf of someone under that age, "if he knows or has reasonable cause to believe that the substance is, or its fumes are, likely to be inhaled by the person under the age of eighteen for the purpose of causing intoxication".

The Act was successful in removing "glue kits" from sale – products not unlike those NPS sold today as "room odourisers" or "plant food", in that they were products intended to be sold specifically as intoxicants and not for any legitimate adhesive purpose. Subsequently, the Act has been successfully applied to NPS, for example, in the 2013 prosecution of a market stall-holder for the sale of synthetic cannabis to a 16-year-old. In England, Wales and Northern Ireland, the legislation only relates to under-18s. This is not the case in Scotland, which is not covered by this legislation, and where common law has been used in the past to prosecute. Here, the New Psychoactive Substance Expert Review Group has recognised that, for both adults and young people: "It is clear a charge of culpable and reckless conduct could be relevant to the sale and supply of NPS in certain circumstances" (p. 15).

This, however, is not a direction the UK government has chosen to pursue and the NPS bill, if passed, is likely to lead to a repeal of The Intoxicating Substances (Supply) Act. In fairness, it is the case that with regard to VSA, relatively few prosecutions have been made under the Act, and even fewer convictions, as shown in Figure 1.

However, one might argue that intent to supply for the purpose of intoxication would be less problematic to prove for recreationally oriented products such as NPS than for the legitimate household products involved in VSA.

It is also interesting to note Esmail *et al.*'s conclusion in 1993 that the legislation "[…] may have restricted the availability of glue and solvent-based products but has had no effect on the availability of products such as butane gas lighter refills" (p. 359). Although after 1986 there was a significant decrease in "solvent" deaths among under-18s compared to adult VSA deaths, the chart in Figure 2 demonstrates that there was no decrease in butane/aerosol-related deaths.

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Figure 1 Numbers proceeded against and convictions obtained under the Intoxicating Substances Supply Act 1985 between 1985 and 2011 (Ministry of Justice Data)

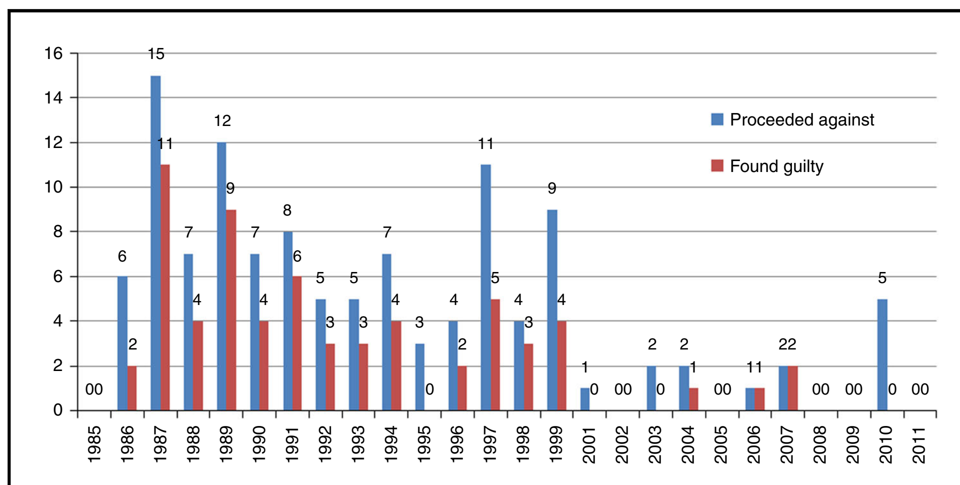
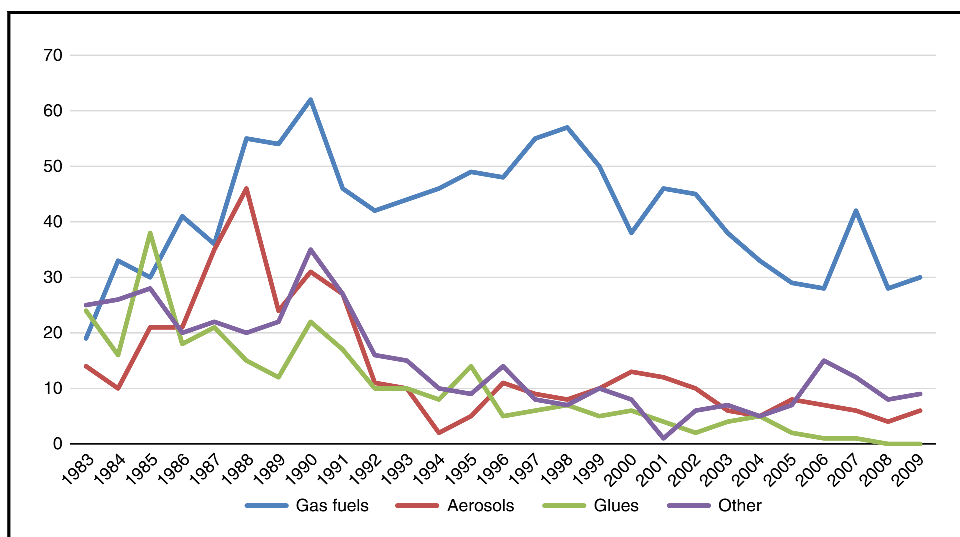


Figure 2 VSA deaths by product, 1983-2012 (St George's data)



It is not unreasonable to suppose that some users "shifted practice towards the riskier practice of "gas sniffing" (Esmail *et al.*, 1992, p. 692), just as there are concerns today that the classification of, for example, mephedrone as Class B drug, created a market for even more dangerous "legal" replacements. Seddon (2014) notes that: "One of the drivers for the NPS trade has obviously been the current system of prohibition itself". However, if all NPS are made illegal, users' choice about the drugs they consume may also lead to a level of self-regulation: "It will be interesting to see if the NPS industry can compete with products that have both an acceptable safety profile and remain sufficiently interesting to consumers" write Hughes and Griffiths (2014).

The NPS bill fundamentally shifts from "the Misuse of Drugs Act's approach which says that we will ban or control something if we have evidence of harm […]" (e.g. the deaths directly attributed to glue that precipitated The Intoxicating Substances (Supply) Act) "to the presumption that all substances are harmful" (Sumnall, 2015). If legislation is not going to

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discriminate between different levels of harm, it becomes all the more imperative that education, prevention and harm reduction initiatives are in place to do so. With this in mind, it is a matter of concern that the new bill's "focus on legislation will likely lead to more resources being channelled into enforcement at a time when we need to improve prevention at a national level" (Thurman, 2015).

Public awareness

That "drug education mustn't be a subject just for schools or the youth service" was a key tenet of the Drug Education Forum (2012) which, until, supported local authorities and schools to implement best practice in drug education. "Parents have a strong influence over young people's decisions regarding drugs and alcohol, perhaps more than they realise" ("Engaging parents in drug education in schools and in the community", 2012). And it was through a campaign targeted at parents that the Department of Health chose to raise public awareness about VSA in the early 1990s:

> Coincident with the 1992 Department of Health Advertising Campaign, VSA deaths in boys and girls (< 18 years of age) fell by an estimated 56% (95% CI: 36%-70%) and 64% (20%-84%), respectively, from the underlying trend (Butland *et al.*, 2013).

Although, for the most part, "the evidence for the success of campaigns focusing on illicit drug use is inconsistent" (Wakefield *et al.*, 2010), in 1992, the then Department of Health's national, evidence-led prevention campaign did coincide with "a sharp drop in deaths" among children. "Of course, this does not necessarily mean that the campaign caused the fall in numbers of deaths, only that there is good evidence that there was a fall in deaths which happened at the same time as the campaign" (Taylor *et al.*, 1996).

An evaluation of the campaign's impact, carried out later by Diagnostics Social & Market Research Ltd. (1992), describes the campaign in detail. It "contained two separate elements, one featuring solvent abuse and the other general drug misuse. The Solvent campaign had TV and press elements, whereas the Drug campaign was press only. Both campaigns featured a response mechanism which released copies of solvent/drug booklets".

The main aim of the campaign was "to raise all parents' awareness and concern about the real risks of solvent abuse, so undermining their complacency", and the secondary aim "to offer them an opportunity to obtain further information (via the booklet)".

"The main target for the Solvent campaign was parents of children aged 18-16 years. The secondary target (for both campaigns) was all concerned adults (friends, relatives, shopkeepers, etc.)" (p. 1).

The advertisements were effective in getting copies of the booklet into 30,000 parents' hands. Despite reservations that there was "relatively little evidence to suggest that the campaign had stimulated discussion between parents and children that was anything more than superficial" (Andrew Irving Associates, 1993, p. I; for the Department of Health), the number of deaths of young people from VSA was seen to fall dramatically. "Government claims credit as solvent deaths drop by a third" announced Druglink in 1995, quoting Minister for Health, John Bowis, who asserted categorically: "the results […] show that parents have taken notice of the messages in what was a hard-hitting campaign".

The St George's team continued to review the figures annually, Taylor *et al.* (1999) confirming: "the evidence is that there was a large and sudden fall in VSA deaths among children following the campaign, and that this reduction has persisted up to the end of 1997. There have been other, smaller, campaigns since 1992, aimed at parents or young people, which may have reinforced the message of the national campaign" (p. 10).

It is not unlikely that other factors (such as a simultaneous rise in the use of other, potentially less harmful, recreational drugs over this time period, for example) also impacted on the fall in young people's deaths. But the 1992 campaign deserves recognition. It was large-scale, well-funded and, critically, based on research. It was motivated by the need to reduce deaths among young people and this was subsequently seen to occur; it is interesting to note in the Figure 3 that there was no subsequent equivalent fall in adult deaths. Summarising Butland *et al.*'s findings, Ives

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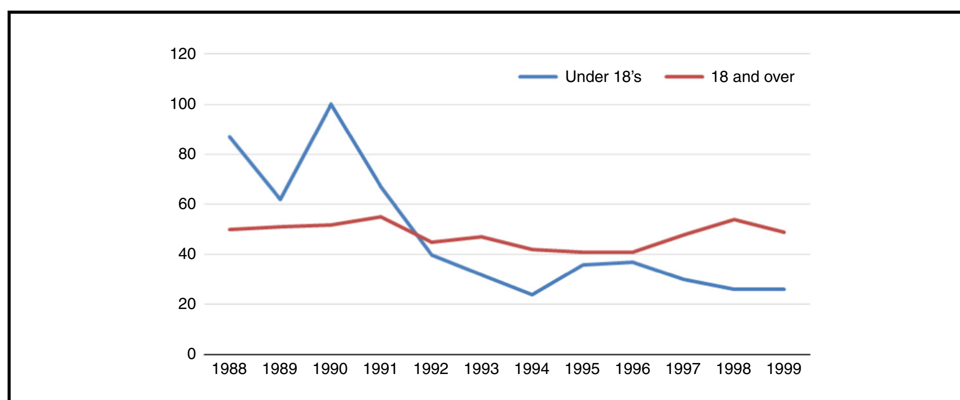
Figure 3 Under 18 years/18 years and over VSA mortality (St George's data)



(2013) writes: "Although it cannot be said with certainty that the fall in under-18-year-old deaths was caused by the DH Campaign, it is a striking finding based on solid, thorough research […] that should be taken account of by all those concerned with prevention, especially as it addresses two areas of great importance: firstly, it indicates that large-scale, adequately funded prevention campaigns can have an impact; secondly, it indicates that targeting parents can have an impact on what their children do. We need more public health campaigns of this quality".

There have been two government-led campaigns on NPS so far, both targeted directly at young people. In 2013, the government "ran a targeted communications campaign to raise awareness of the risks of taking NPS through the summer festival season in 2013. The communication was highly targeted to contemplators and dabblers to avoid raising awareness of NPS to those who may not otherwise be aware of them" (NPS Expert Review Panel). A different approach was taken in August 2014 by the Home Office, whose £17,419.90 campaign of radio, digital and mobile phone adverts, "launched to warn of risks of 'legal' highs" was targeted generically "at people aged 15 to 21".

It is likely that this older age group is less open to parental influence, and has far greater access to and involvement with media than their 1990s contemporaries. Using social media tools to engage directly with a specific demographic is ideal for a reactive campaign – perhaps providing harm reduction advice, for example – and makes sense as one element in a longer term and coordinated prevention programme. However, the 1992 VSA campaign is still a useful reminder that a considered strategy of delivering earlier, long-term prevention messages for young people, before they are engaging with these drugs, either directly or through parental intervention should not be ignored as another option for the future.

Education and prevention

The question of how best to help young people "'just say no' when they may know others who said 'yes' to drugs and liked it" (Akwue, 2012) is the subject of pressing current debate, where drugs education is one element of a broader approach to developing young people's life skills.

To quote the NPS Expert Panel: "It is essential that NPS are addressed as part of a curriculum that helps to build young people's resilience, whilst noting the limited evidence base on effective programmes" (p. 50).

In 2012, the Advisory Council on Misuse of Drugs told the House of Commons Home Affairs Committee (2012) that "the evidence showed that drug education did not necessarily affect drug-taking decisions but did improve people's knowledge about substances" (Drugs: Breaking the Cycle, p. 25). Bearing this in mind and "the limited evidence base on effective programmes", what has justified a practitioner such as Re-Solv going into schools to deliver preventive education if they cannot prove long-term efficacy?

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In Re-Solv's case, working with a form of substance misuse that can kill a child outright, the answer has been the fully evidenced seriousness of the potential harm. As a result, until such a time as VSA is embedded into a statutory, evidence-based drugs and/or life-skills education programme, the provision of relevant (in that the school has recognised a need to invite Re-Solv in), factual information is, at the very least, sensible, and in environments where VSA is actively happening, or among vulnerable children, essential. Accepting that the goal of delivering drugs-specific education is "to ensure that young people are equipped with the information they need to make informed, healthy decisions and to keep themselves safe" (HM Government 2014, p. 7) then a balanced approach that recognises both the advantages and disadvantages of substance misuse is likely to be more credible and thought-provoking for young people. As Education Scotland's (2009) curriculum for excellence frankly puts it: "I understand the positive effect that some substances can have on the mind and body but I am also aware of the negative and serious physical, mental, emotional, social and legal consequences of the misuse of substances" (p. 14). Unlike "just say no", this approach opens the door to discussion about broader themes of personal choice, responsibility, peer influence, and so on – all factors in the building of "resilience".

Clearly the educational messages need to be appropriate to the level of existing knowledge within the class. McKay *et al.* (2014) note "the importance of basing a programme on the experiences and needs of participants in order to capture their attention and engage them in the intervention". This has been particularly relevant for VSA, where it is primary school children who are most at risk: HSCIC (2012) data annually confirms VSA as the most common form of substance misuse among younger children (11-13 years old) and found, in 2012, that "80% of pupils who first tried drugs at the age of 11 or younger reported that they sniffed volatile substances" (p. 26). But one class of pupils, for example, may have no prior knowledge of VSA; another may have hazy levels of information (or misinformation); another may include children actively using volatile substances – all of which needs to be gauged so that the resultant session is appropriate to the needs of that group of children. As a result, one session need not reference "drugs" at all, but focus on, for example, safety in the home; another session may involve a more frank discussion of VSA. Both, however, will lead into group activities that provide an opportunity for children to use their VSA learning as a means to explore wider questions of self-esteem, peer influence, and so on – building an "awareness of the benefits of a healthy lifestyle in relation to their own or other's actions" (Department for Education and Skills, 2004, p. 18).

There are problems with Re-Solv's approach, as there will be with any approach that is essentially a stopgap in the absence of a more comprehensive solution: are these sessions always relevant to pupils and responsive to their needs? Is the session complementary and integral to the school's broader alcohol and drug education programme? Although collating and evaluating feedback can show improved levels of knowledge (and retained knowledge over a period of time), what evidence do we have of any long-term and positive behaviour change? Even assuming that Re-Solv's school-based work has played some part in the downward trend in VSA mortality among young people, is a teaching approach that focuses on a single "drug" sustainable – or even appropriate? Discussing NPS, Ives (2013) argues that "there is no point in trying to educate people about the detail (such as the effects and the dangers) of this huge range of substances – this is a fast-moving marketplace and "playground" and it is impossible for slow-moving bureaucracies to keep up". While Re-Solv would press for recognition of the very specific harms associated with VSA, they would agree that this should sit within the context of Ives' broader recommendation:

> Schools should not be asked to "warn the kids" about the latest drugs scare, but should be allowed, encouraged and enabled to do a solid job of educating young people in appropriate attitudes toward substance misuse (such as respecting their bodies), being aware of risks (in a broad sense) and developing the skills to deal with substance-related situations.

This suggests a school-wide initiative, something broader than the current statutory requirement to teach drugs education as part of the science curriculum. (It is notable that PSHE, although recommended by the DfE as a means "to build, where appropriate, on the statutory content already outlined in the national curriculum" is not itself statutory.)

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Mentor-Adepis' (2014) "Quality standards for effective alcohol and drug education" address not only the delivery of drug and alcohol education, but emphasise the need for this whole school approach (reminiscent of the National Healthy Schools Programme) which is most effective when "addressed by the whole school community [and] consistent with the school's values and ethos, developed by all members of the school community" (p. 14).

In the context of Ives' final point regarding pupils' wider skills development – the "resilience" cited by the NPS Expert Panel – it will be interesting to follow The Good Behaviour Game UK trial, beginning in schools in September 2015. "The funding for Mentor to lead a national randomised controlled trial of an evidence-based primary school intervention is a notable endorsement of the gathering and important interest in prevention and early intervention" read the organisation's News webpage in an encouraging tone on 26 March 2015.

Working with manufacturers and retailers

Although the downward trend in VSA mortality among young people does not prove the effectiveness of the prevention work that has taken place, it does perhaps highlight the need for an interconnected raft of measures – "tackling drugs together", as the 1995 government strategy had it: cross-departmental policy-making, public awareness strategies, funding for targeted community work in specific, localised areas of need and, finally, the involvement of all stakeholders in thinking about prevention measures.

Since VSA involves the abuse of legitimate consumer products, the products' manufacturers and retailers have always played a key role in finding solutions. Re-Solv itself was founded by an Evode (now Bostik) Director on secondment. In other cases, the involvement of manufacturers has led to significant industry change – the removal of toluene from consumer glues, for example, or the creation of the SACKI (solvent abuse can kill instantly) logo that now appears on the vast majority of aerosol cans in the UK.

This involvement is, of course, one of the most significant differences between VSA and NPS, and yet there may still be vestiges of read-across. It has, for example, always been important that manufacturers and retailers were part of the discussion. Up to this point, the two major nitrous oxide distributors in the UK have not been part of stakeholder group committees; perhaps they now should be. It is also notable that the government has reached out to festival organisers; they, too, will have interesting perspectives to add to the debate.

The role of retailers themselves will be largely dictated by the terms of the NPS bill. When legislative changes were made in the past, Re-Solv and Trading Standards worked together to distribute "retail kits". The goal was both to ensure that shopkeepers and their staff were aware of the legal position, and to provide them with the appropriate signage (door stickers, etc.) to help them pass this information on to their customers. This also gave out a sign to the local community that here was a concerned and responsible retailer. Today, local opposition to high street headshops is widely reported, with community pressure groups actively campaigning for closures. The NPS bill will effectively achieve this goal. But it will be interesting to see how New Zealand's regulation of the legal highs market incorporates retailers and "responsible retailing" practices that might aid headshops with their public relations and develop "better" even if not "best practice" retail models in association with local councils and communities.

An improved dialogue with retailers would also be significant from the point of view of harm reduction. For NPS, the availability of up-to-date information about novel drugs could save lives – and there is evidence that festival and club venues, at least, may be open to exploring ways that enable them to disseminate this information to customers. The UK Festival Awards "Best New Technology" award was won in 2014 by The Loop director, Professor Fiona Measham, with Parklife festival "for their revolutionary portable substance-analysis system". The recent "Superman" pill deaths sparked discussion about whether or not the UK has an adequate alert system for when dangerous drugs hit the streets. It would seem that, for NPS, venues might have a similar role to play in the strategic thinking and practical implementation on harm reduction that manufacturers pioneered for VSA.

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Conclusion

The past 30 years have seen a significant fall in the number of deaths associated with VSA in the UK. A re-examination of the legislative and preventive strategies evoked over that time may now suggest the following useful points of learning in the light of today's "legal highs" or NPS.

Banning substances or making their sale or use illegal, is not necessarily effective. While, arguably, the Intoxicating Substances (Supply) Act (1985) would be less problematic to enforce for NPS, which have no alternative legitimate use, than for the household products associated with VSA, it is likely this legislation will be repealed following the proposed NPS bill.

The shift in VSA from glues to butane gas also demonstrated that intoxicating substances are replaceable. If one is banned, or chemically or physically altered to make it difficult to use to achieve intoxication, then people who seek a "high" will find other substances, which may be more dangerous than the ones they replace or have other significant long-term consequences. Although the NPS bill tackles the flow of "new" substances by making them all illegal, it is not unlikely that the bill could see a corresponding lift in quite legal but potentially hugely problematic alcohol consumption, for example.

It is possible to reduce the harm from substance misuse by providing sensible and targeted harm reduction advice. It was highly controversial, when, as long ago as Institute for the Study of Drug Dependence (1980, the forerunner of DrugScope) advised that putting a large plastic bag over the head to inhale glue was particularly risky and should be avoided – but it was advice that may have saved lives. Today, in the rush to condemn all NPS use as "deadly", it is easy to forget that some of these substances are more dangerous than others. As with VSA in the 1980s, the science is uncertain and we know nothing about the long-term effects of the use of some of these novel substances. Yet, we can use what little knowledge we have to provide tentative advice to committed users and engage in a dialogue with them about their use that might enable us to learn more. This will be true for treatment, as well as harm reduction services: "using our expertise […] to build evidence-based treatment for club drug problems" is the work, for example, of the Central and North West London NHS Foundation Trust Club Drug Clinic (2015).

And an optimistic finale: prevention can work. It requires sustained effort, a continuing focus and evidence-based practice that is truthful and credible to the target audience. VSA prevention has not reached this nirvana, but we have seen glimpses of successful practice, and we know what to aim for. The influx of NPS has made the need for effective education and prevention all the more necessary, with evidence from the European Commission's (2014) "Young People and Drugs" report showing a rise in the average consumption of "legal highs" since 2011 among young people in both Ireland (where they have been banned since 2010) and the UK where the NPS bill is still pending. "The average EU consumption of 'legal highs' among young people (15-24 years) has increased from 5% in 2011 to 8% in 2014. The highest increases occurred in Spain (5% to 13%), Ireland (16% to 22%), and the UK (8% to 10%)" (European Commission Memo, 2014). As with VSA in the 1990s, the level of NPS use among young people in both Ireland and the UK is among the highest in Europe.

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Corresponding author

Victoria Leigh can be contacted at: v.leigh@re-solv.org

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