Terrorism has dominated and to some extent limited the public's discussion about the restriction of household chemicals. Fertilisers were used frequently by the IRA, while peroxides formed the basis of more recent al-Qaeda-linked improvised explosives made in the UK. In November 2013 two government consultations solicited responses about proposed controls on a selection of household chemicals that are used legitimately in hobbies but are also implicated in harmful activities.[[1]](#footnote-2)

**In anticipation of the report resulting from the consultations, this POSTNote reviews the role of household chemicals in acid attacks, solvent abuse and suicide, and the methods for reducing harm.**

**Acid attacks**

Attacks on people with acid or other corrosive fluid have more than doubled in the past six years.[[2]](#footnote-3) The type and source of acid varies. Sulphuric acid could come from car batteries, or be in found in drain cleaner. Attackers have been known to concoct their own acids.[[3]](#footnote-4)

This type of attack usually involves one individual attacking another, most often known to them, rather than being an indiscriminate attack on a stranger or a mass of people. The physical and mental effects for the victim are long lasting and serious. Media coverage of acid attacks may contribute to copy-cat acts, as in the case of the acid attack survivor and TV presenter Katie Piper who was named as an inspiration for a 2012 attack in Dagenham.[[4]](#footnote-5)

NHS experts suggest that the prevalence of acid attacks abroad in India and Bangladesh, where acids rather than branded formulations are more readily available for household and jewellery cleaning, could be related to the rising levels of UK assaults occurring in Asian communities.[[5]](#footnote-6)

Corrosive chemicals can also be used to vandalise property[[6]](#footnote-7) which causes distress and financial loss. There are no effective controls to prevent this. Changing the preparation (e.g. to solid or gel) or altering the packaging which already makes the products safe and easy to use in legitimate situations, would be an unreasonable response to such a minority abuse of the chemicals. These are premeditated attacks, not opportunistic, so the perpetrators would be unlikely to be deterred by an acid that required more preparation.

**Solvent abuse**

Solvent abuse is as prevalent today as it has always been, however, it does not carry the 'glamour' of classified drugs nor receives the same publicity.

Adhesives, Tippex, paint thinners, varnish, lighter fluid, petrol, and aerosols such as cosmetic products are abused for an instant, short-lived high. Solvents are responsible for approximately 50 deaths annually in England and Wales.[[7]](#footnote-8) Their low price and ready availability in homes makes solvents attractive, especially to young users.

Data from work carried out in UK prisons indicates that solvent abuse is especially prevalent amongst the traveller community and migrants from the "Eastern bloc" countries. However it is generally described by inmates undergoing addiction counselling as something they did in the past, and that solvents are no longer their substance of choice.[[8]](#footnote-9)

Legislation specific to solvents exists and goes some way to preventing harm. The Intoxicating Substance Act 1985- Supply is widely used to prosecute shop keepers for selling solvents to individuals under 18 years of age. Aerosol manufacturers are seeking out alternative propellants with the aim of reducing the incidence and profile of problematic solvent abuse and the tragic deaths that accompany it.

The recent patenting of an aerosol valve that uses compressed air instead of a solvent based propellant, and harnesses the turbulence in the container, provides yet another route by which this possible danger associated with household chemicals can be reduced.[[9]](#footnote-10)

**Suicides**

Chemical suicides, also called "detergent suicides" use household chemicals to produce poison gases, usually hydrogen sulphide or hydrogen cyanide, in a confined space. The worldwide spread of this trend has been traced to 2008 Japan, spreading via internet forums, resulting in the first UK case in 2010,[[10]](#footnote-11) with others following soon after.[[11]](#footnote-12) Although some users post warning signs at their location, this method has the potential to poison first responders and people living nearby.[[12]](#footnote-13)

The volumes required are the same as for normal household or garden use, so purchasing unusual quantities are not an indication of this type of use. There may be a combination of items purchased that could trigger a warning, but would result in many false positives, reducing the effectiveness of the warning.

It is likely that this method of suicide will continue to increase as a result of its coverage in news media, ready availability of chemicals and information to anyone searching for it online. Media handling has on the whole been sensitive and responsible, following best practice guidelines to reduce copy-cat actions.[[13]](#footnote-14)

**Restricting the sale of household chemicals**

Anybody could be at risk from the hazards posed by users of domestic chemicals, no matter what their background. Other than age restrictions, no other profiling is likely to be helpful. Age restrictions on solvent sales have been successful to a certain degree, though do not prevent abuse with chemicals in the home.

Advice given to businesses on identifying suspicious customer behaviour includes anyone who doesn't fit the usual profile of their customer base, the avoidance of questions and an unwillingness to share plans for using the product, and the refusal of suitable alternatives. These behaviours may be seen any day, with any form of product, in people who have no plans to use them for harm. However, retailers have a responsibility to be aware that certain products could be used for harm and to refuse sales if they decide it is prudent. This advice is unfortunately irrelevant to online sales. The consultation does not address online sales of potentially harmful domestic chemicals, which is a serious limitation.

Poisons, but not the household products that they are formulated into, are classified as either Part 1 or Part 2 poisons. They can only be sold by registered retailers, and buyers of Part 1 poisons must sign the Poisons Register. This is a weak deterrent. People determined to obtain a restricted substance have no qualms about providing a false name and address. The Register records sales, it does not not prevent misuse.

The 2013 consultation suggested a Home Office licence could be applied for by legitimate domestic users. Any licence to obtain chemicals must be carefully administered in order to be meaningful. The Householders Certificate, which was publicised during the 1970s in response to fatal herbicide poisonings, proved ineffective at preventing sales because that certificate could be authorised by any householder. [[14]](#footnote-15)

The new licence described involves background checks, a costly administrative burden and could damage the Home Office's reputation if a licence is granted to someone who then misuses the chemicals. Convincing all online sales and distribution companies to comply with new buyer-certification checks would be inviable. Considering the vast majority of people who use chemicals safely, awareness and vigilance are the most feasible methods of preventing harm.

1. Consultation on proposed changes to the Poisons Act 1972, Poisons Rules 1982, Poisons List 1982 and associated amendments. November 2013. [↑](#footnote-ref-2)
2. Laura Donnelley, (2013) "Number of UK attacks involving acid and other corrosive substances soars", *The Telegraph* 12.08.2013 <http://www.telegraph.co.uk/health/healthnews/10238174/Number-of-UK-attacks-involving-acid-and-other-corrosive-substances-soars.html> [↑](#footnote-ref-3)
3. Ex-soldier in acid case was 'Jekyll and Hyde'. The Times (London) 22.10.1986, pg 3; Issue 62595 [↑](#footnote-ref-4)
4. Mary Konye's row with Naomi Oni led to acid attack, 23.01.2014 <http://www.bbc.co.uk/news/uk-england-london-25840681> [↑](#footnote-ref-5)
5. Laura Donnelly (2013) [↑](#footnote-ref-6)
6. Acid attack on 26 cars at Bangor dealership, 31.01.2014 <http://www.bbc.co.uk/news/uk-northern-ireland-25985012> [↑](#footnote-ref-7)
7. <http://www.sgul.ac.uk/media/news-archive/2012/annual-deaths-from-solvent-abuse-in-the-uk-rise-from-38-to-46> [↑](#footnote-ref-8)
8. Personal Communication, A.Rushmore kickthehabitwithme.co.uk Drug and Alcohol Counsellor [↑](#footnote-ref-9)
9. Eco-Valve, Spray Research Group, University of Salford <http://www.salvalco.com/> [↑](#footnote-ref-10)
10. Inside the chilling world of suicide forums 26.10.2010 <http://www.mirror.co.uk/news/world-news/inside-the-chilling-world-of-suicide-forums-1692606> [↑](#footnote-ref-11)
11. Couple killed after cyanide pact at luxury hotel 02.08.2013 <http://www.heraldscotland.com/news/home-news/couple-killed-after-cyanide-suicide-pact-at-luxury-hotel.21759163> [↑](#footnote-ref-12)
12. Chemical Suicides [http://www.regionviiems.com/forms/SCC%20CE%20Feb%2012.pdf](http://www.regionviiems.com/forms/SCC CE Feb 12.pdf) [↑](#footnote-ref-13)
13. Samaritans, Best Practice Suicide Reporting Tips <http://www.samaritans.org/media-centre/media-guidelines-reporting-suicide/advice-journalists-suicide-reporting-dos-and-donts> [↑](#footnote-ref-14)
14. National Archives, Kew, HO 305/32, Letter from R Kendall to GR Waters, 22.01.74 [↑](#footnote-ref-15)