Substituting Reduced-Toxicity Spray Paints for Aromatic Spray Paints and the Effect on Suspicious Sales

Christina Marel*

Abstract

Increasingly, the abuse of legal substances is being recognised as a problem in both urban and remote areas, and responses draw on a variety of regulation methods, which have broader implications for the supply and demand control of other drugs. In this paper, the author draws on data collected before, during and after the substitution of reduced-toxicity spray paints for aromatic spray paints in two Alice Springs spray paint retailers. The data, collected by the Central Australian Youth Link Up Service (CAYLUS), is used to illustrate: the change in purchase habits for substance misusers following the introduction of reduced-toxicity spray paints; the overall effect on sales of spray paints and 'suspicious' sales; and the urgent need for more accurate retailer data. The policy implications of the findings are explored in terms of the need to address volatile substance misuse with demand reduction strategies in conjunction with supply reduction strategies, in order to avoid the possibility of substance displacement.

Introduction

The use of domestic substances with volatile elements as means of intoxication has a 'peculiar power to shock and disgust' the wider mainstream users of domestic products (MacLean 2005:308). Volatile substances are typically domestic products such as glue, nail polish remover, computer keyboard cleaner, and petrol. The misuse of these substances can lead to the construction of volatile drug use as dangerous and threatening, enabling the wider population to perceive the users as out-of-control and abnormal, impeding the possibility of responsive and innovative policy development (MacLean 2003).

However, more recently, inventive approaches that address supply management have attempted to tackle substance misuse with new methods. This paper explores the effect of a reduction of aromatic spray paint supply by a major paint retailer in Alice Springs on overall sales and suspicious sales of spray paint, and probes the issue of change in purchase habits for volatile substances, using data collected over a five-year period.[1] This was a strategy undertaken by the Central Australian Youth Link Up Service ('CAYLUS'), as part of a

* Christina Marel is a PhD candidate in the School of Social Sciences and International Studies, University of New South Wales, NSW Australia. Email: c.marel@unsw.edu.au .

1 This paper was developed in association with CAYLUS, based on data collected by CAYLUS from 2004–08. Data analysis was conducted by the author in September–October 2008, using the retailer forms that had been assembled by CAYLUS over that five-year period.

series of attempts to minimise harm through the promotion of a responsible retail of solvent program in Alice Springs.

The purpose of this paper is four-fold: first, to explore the effects the introduction and substitution of reduced-toxicity spray paints for aromatic spray paints has on overall and suspicious sales of aerosols by two major spray paint retailers in Alice Springs; second, to bring attention to the community retailer liaison work that CAYLUS is involved in within Alice Springs; third, to illustrate the difficulty in collecting accurate and reliable retailer data; and fourth to comment on broader issues of regulation that this case study illustrates.

This paper was developed in association with CAYLUS, who collected the data over a five-year period. However, this data was not collected for the purposes of a research study, and thus is not statistically reliable or valid. Rather, it is useful as a tool for demonstrating the effect of measuring supply through the reduction of a harmful substance, which should be kept in mind when interpreting the results.

Background

Currently, the use of volatile substances for intoxication purposes is not a criminal offence anywhere in Australia. However, since 2002, amendments have been made to Australian legislation in all states to allow police greater and more appropriate powers for dealing with substance misusers, with a focus on harm minimisation without criminal consequences (Gray et al 2006). It is significant to note how the legislative responses to substance misuse have broadened police powers rather than created offences, challenging the assumption that regulation involves the creation of crime, and pointing to the close relationship between offences and powers in regulation. The demands of a harm minimisation approach are too heavy to be the burden of the police alone, and require a multi-agency approach, involving health and community workers.

The difficulty in attempting to limit the use of volatile substances is associated with the legality of the substances, and their primary purpose, unlike drugs such as heroin, cocaine and marijuana, which are produced for the purposes of intoxication. Further analysis and critique of this perspective can be made by considering the medical uses of heroin, cocaine and marijuana and the fact that cigarettes and alcohol are both legal substances but produced for the purposes of intoxication. However, in these cases, the substances are used in the manner initially intended, whereas volatile substances are often substances such as spray paints, glues and petrol, which are misused in order to provide intoxicating effects. These substances are inexpensive and easily accessible to those under 18, which further distinguishes them from illicit substances that are often relatively expensive and difficult to obtain. Notable exceptions to this have been observed by Delahunty and Putt (2006), who found reports of young girls offering sex in exchange for access to cannabis, alcohol and spray paints in Woorabinda and Rockhampton, Queensland.

Regulatory responses to volatile substance misuse typically have originated from legislative, supply or demand approaches, which have sought to reduce the harms associated with use. Such approaches have included the broadening of police powers without the creation of offences, product modification, restricting access to volatile substances such as petrol and paints by locking-up and caging products, community-based treatment and rehabilitation centres, as well as youth programs in urban and remote areas that are educative, diversionary, cultural and recreational (d'Abbs and MacLean 2008). In addition to these responses, some of the regulatory burden has been passed on to retailers responsible

for selling volatile substances, through industry self-regulation with sanctions and rewards (Ayres and Braithwaite 1992).

In this study, the retailers responsible for selling volatile substances could be threatened with criminal action under the *Volatile Substance Abuse Prevention Act 2005* (NT) if they are found selling goods to those suspected of using the substance for intoxication purposes or selling to underage customers. However, in practice, these relationships are built on good faith, cooperation, and a non-adversarial approach and the potential damage to retailer and community worker relations would most likely negate the benefits of this strategy (CAYLUS 2009, pers. com.). These retailers are monitored by CAYLUS, a community-based agency, which has tasked itself with a responsive regulatory role within the community.

There are approximately 250 different pharmacological and household products available in Australia that are capable of providing intoxicating effects to the user, and these are generally divided into four main categories — volatile solvents, aerosols, gases and nitrates (Gray et al 2006; NIDA 2005). Nitrates have a slightly different effect on the central nervous system and often are classified as sexual enhancers rather than volatile substances, and these are beyond the scope of this research.

It has been argued that the inhalation of spray paint, also known as 'chroming', is most commonly found in urban settings, due to the availability of the substance, while petrol sniffing occurs more commonly in remote areas (Gray et al 2006; NIDA 2005; d'Abbs and MacLean 2008). The intoxicating effects depend on the method of inhalation, as well as the age and gender of the user (VDHS 2007). The chemicals in the inhalant are absorbed through the lungs and enter the bloodstream, where they are dispersed to the brain and other organs in the body (NIDA 2005). Intoxication effects are rapid and the effects are similar to that of alcohol, such as slurred speech, impaired coordination, euphoria and exhilaration, dizziness, hallucinations and agitation (NIDA 2005; Gray et al 2006).

The intoxicating effect of inhalants occurs rapidly, but last only a few minutes, often leading the user to seek to prolong the effects by continuing to inhale over the course of hours (NIDA 2005). The dangers involved in the inhalation of paint are associated not only with the toxins and chemicals in the paint itself, but also in the propellant, which, depending on the paint, contains toluene and butane, which are some of the substances that produce intoxicating effects (NIIS 2008). Other factors that are related to the death or injury of the user include sudden sniffing death, which is due to the excess stress through 'ventricular arrhythmias' placed on the heart by chemicals in the solvent, as well as the possibility of dangers, accidents and injuries that may occur while intoxicated (Lubman et al 2006:328; NIDA 2005; Gray et al 2006; NIIS 2008).

The legitimate use of volatile substances by the majority of the population means that prohibiting the sale of spray paint is not a viable policy option. However, the replacement of toxic and intoxicating spray paint with low aromatic, low-toxicity spray paint allows legitimate users of the substance to maintain use, without attracting individuals who desire the intoxicating effects. Such products have removed toluene and xylene from the propellant and lead from the paint, thereby eliminating the 'high' associated with chroming (White Knight 2005), though to date this has not been verified by any substance user.

Prevalence

Gathering an accurate estimate of volatile substance misusers is notoriously difficult, as substance misuse in Australia is not a criminal offence, record keeping by law officials is not a uniform or common practice. Inhalant use is commonly a secretive and furtive activity, and estimates of use are thus often inaccurate (d'Abbs and MacLean 2008). However, elements of volatile substance misuse are highly visible, and are the cause of much alarm in communities whether large or small (CAYLUS 2008).

With these factors in mind, the inhalant prevalence data should be received critically. In April 1997, it was estimated that there were 60 inhalant users in Alice Springs, most of who were sniffing paint (Mosey 1997). This was not confined to the Indigenous population, and the use of paint as a vessel to intoxication was in practice across Queensland in urban and rural communities, Indigenous and non-Indigenous populations, with youths aged as young as 12 engaging in the clandestine activity (Gray et al 2006; d'Abbs and MacLean 2008). However, in a school-based survey administered by White and Hayman (2004) in 2002, 21% of 12–17 year olds reportedly have used inhalants. In the general Australian population, the proportion is significantly lower, with 2.5% of Australians over 14 surveyed by the 2004 National Drug and Household Survey ever having tried inhalants (d'Abbs and MacLean 2008).

The majority of inhalant misuse is categorised as experimental or occasional misuse, with few users becoming regular, chronic misusers of spray paint (d'Abbs and MacLean 2008). Much chronic use of volatile substances is associated with petrol in remote areas, and with an older population (d'Abbs and MacLean 2008; Grey et al 2006). In this way, substance misuse is characterised by its episodic and clustered breakouts of use, followed by a dispersal of users as seasoned misusers are forced to move to other communities with little or no substance misuse, attracting new experimental users (CAYLUS 2008; Gray et al 2006; d'Abbs and MacLean 2008).

Reduced-toxicity spray paints

The introduction of reduced-toxicity spray paints by several manufacturers including White Knight, Motor Tech, Export, Dulux and Plasti-kote, is an example of product modification, and was initially introduced to reduce the impact of aerosol propellant on the environment (NIIS 2008). These spray paints are produced in fully recyclable cans, contain no lead, and do not contribute any CFCs damage to the ozone layer (White Knight 2005). However, an additional consequence of the chemical modifications has been a reduction in the intoxication effects produced by the reduced-toxicity spray paint products.

Addressing the supply of spray paints through product modification is a way in which opportunity for substance misuse is reduced. The situational opportunity for volatile substance misuse is of crucial importance: as stated earlier, volatile substances are often misused due to their wide availability, low cost and relatively straightforward accessibility (Gray et al 2006). In this way, the decision to take advantage of the easy obtainment emphasises the active role individuals have in their drug use. Further, the social stigma attached to substance misuse can present barriers to direct purchasing, and present other opportunities for non-substance users to purchase substances to curry favour for young people, making responsible retailers ever more important.

In contrast to addiction models of behaviour that view substance use as a need that 'begs to be satisfied', opportunity forces individuals in social situations to make conscious and active decisions to participate in their drug and substance use (Modell et al 1992:268). Individuals acknowledge the opportunity for substance misuse and choose to take advantage of these opportunities, rather than feel 'compelled' to act through the prior formation of addictive personalities or deviant predispositions (Clarke 1983:231). The motivation to use drugs or engage in other types of crime may not be the result of longstanding reflection, but the result of a fleeting impulse or pressure, that depends on the opportunity and availability of substances. Thus by restricting access to intoxicating substances through product modification, the opportunity to use that particular substance is reduced; however, this raises the possibility of substance displacement, which can only be addressed through demand reduction strategies.

Currently, regular and reduced-toxicity spray paints are available in Alice Springs, with about half of the retailers storing their paints in lock-up cabinets or cages. Although most aerosol retailers offer one or more brands of reduced-toxicity spray paints as an alternative form of paint, only one retailer in Alice Springs sells reduced-toxicity paints exclusively. This retailer was approached by CAYLUS in 2004, and asked to begin maintaining records of sales of spray paints.

CAYLUS began in 2002 as a petrol sniffing prevention project, but has broadened its mission to support 'community initiatives that improve quality of life and affect substance misuse affecting young people' (CAYLUS 2007b). Although based in Alice Springs, CAYLUS currently supports 19 remote communities and youth workers within a discrete area of the Central Australian region, and focuses on supply-reduction measures through the direct targeting of inhalants, and demand-reduction measures such as the development of community-based youth and recreation programs (CAYLUS 2007b).

Early in 2007, CAYLUS bought out all of the remaining cans of toxic spray paint in a major spray paint retailer in Alice Springs, allowing low-toxicity spray paints to completely replace them. For three years preceding this replacement, CAYLUS requested that the retailer maintain records of sales of spray paints, and note any sales the retailers considered to be 'suspicious'. This record keeping continued for a further year, and allowed documentation and comparison of the sales of spray paints before, during and after the introduction of low-toxicity paints, and examination of the sales patterns of aerosol paints in this and one other store.

Design and method

The major spray paint retailer in Alice Springs initially approached by CAYLUS will be referred to as 'retailer A'. Record keeping began in 2004, when retailer A was asked to note the sale of every spray paint, including the date, colour, number purchased, purpose, customer's name or identification number (taken from an identification card), and the signature of the retailer. The vendor was also asked to note the sales that aroused suspicion that the paints may be used for the purposes of inhalation.

In response to increasing reports of chroming in and around Alice Springs, CAYLUS bought out the remaining toxic spray paints at retailer A in January 2007 (CAYLUS 2007a). At the time, information from substance misusers in Alice Springs indicated that the majority of spray paint was being purchased at this retailer (CAYLUS 2007a). Buying out all the toxic spray paints allowed the reduced-toxicity spray paints to be only spray paints

sold at the leading spray paint retailer in Alice Springs. The retailer maintained records of spray paint sales throughout the introduction of reduced-toxicity paint and removal of aromatic paints.

While following the sales by this spray paint retailer, CAYLUS simultaneously collected sales and suspicious sales data from another spray paint retailer, who continued to sell aromatic spray paints, as well as reduced-toxicity paints. This record keeping began in July 2005, and continues today, at what is known as 'retailer B'.

CAYLUS requested that the retailers note any suspicious sales and not sell any spray paints to customers who were on a 'banned' list (CAYLUS 2008, pers. com.). This banned list was a list of known paint sniffers and suppliers compiled by CAYLUS, and was kept with the retailer forms at both stores (CAYLUS 2008, pers. com.). The retailers labeled a sale as 'suspicious' based on a variety of factors, some of which were the reasons given for purchasing the paints, which was a required element before the sale could be completed.

Suspicion was a vague belief that the spray paints may be used for inhalant use, or be supplied to others who may be intending to use them for intoxication purposes; although in the Northern Territory, it is a criminal offence to knowingly supply a volatile substance to a person for this purpose. 'Wheels', and 'Car', were the reasons given to most suspicious sales. Another factor that aroused suspicion was that the consumer was not certain about what they wanted when they entered the store.

CAYLUS provided both retailers with forms that allowed customer sales information to be maintained cohesively, which were collected and replenished whenever the retailers contacted the organisation. The data produced from the forms was then collated and tabulated. This was done by counting the number of sales from each store in each year, by colour, noting the reason behind each purchase and whether the retailer had marked that sale as suspicious. These figures were added together to determine the percentage of suspicious sales.

Results

At retailer A, the majority of suspicious sales involved the purchase of 'chrome' coloured paint — a documented pattern that has led to the term 'chroming' (MacLean 2008). In 2006, 28% of silver chrome paint purchases were labeled 'suspicious'. This is an increase from just over 14% in 2005 and just 3% in 2004. After the introduction of reduced-toxicity paint in 2007, this was reduced to 12.9%.

Table 1: Sales of Spray Paints in Retailer A, 2004–07[2]

Year	Number of total sales	Number of suspicious sales	% of sales
2004	1929	17	0.88
2005	1570	63	4
2006	2856	336	11.8
2007	521	21	4

[2] The substitution of spray paints in retailer A occurred in January 2007.

As indicated in Table 1, at the initial stage of record keeping, suspicious sales of spray paints made up less than 1% of all sales in retailer A, which increased to 4% in 2005. By 2006, the year that prompted the reduced-toxicity paint substitution, suspicious sales had increased to more than 11% of all sales in retailer A. Following the introduction of reduced-toxicity spray in 2007, this figure reduced to just 4%. The number of spray paint sales in 2007 also decreased five-fold, from 2856 in 2006, to just 521, of which only 21 were considered to be suspicious.

Table 2: Sales of Spray Paints in Retailer B, 2005–08[3]

Year	Number of total sales	Number of suspicious sales	% of sales
2004	182	2	1.1
2005	482	16	3.3
2006	125	0	0
2007	46	0	0

As indicated in Table 2, overall sales of spray paints at retailer B were significantly lower than those at retailer A, as retailer B is a smaller spray paint retailer than retailer A. In 2005, suspicious sales made up just 1% of all sales, which increased to a little over 3% in 2006. Overall sales of spray paints similarly increased from 182 sales in 2005 to 482 sales in 2006. In 2007 however, this fell to 125 sales, none of which were recorded as being suspicious. By May 2008, 46 paint sales had been recorded, none of which aroused suspicion.

Discussion and conclusion

This paper demonstrates the effect the introduction of reduced-toxicity spray paints has had on the overall sales of spray paints, and suspicious sales; the change in purchase habits of volatile substances following the substitution of a reduced-toxicity spray paint for aromatic spray paint; and illustrated the need for more accurate and reliable retailer data.

In the year immediately following the substitution of toxic with low-aromatic spray paints, overall sales were reduced by more than 82%, with sales that arose suspicion falling by more than 7%. The connection between a suspicious sale and overall sale is not clear; however, the reduction in overall sales could be due in part to people being unwilling to buy spray paint brands that are unfamiliar to them. Therefore the overall sales may have dropped dramatically as they went in search of their regular brand, as reduced-toxicity spray paints are not manufactured by all spray paint brands.

Another possibility is the fact that legitimate users of spray paints became disenchanted with the retailer when they learned that substance misusers made up a significant proportion of the store's clientele and therefore sought out alternative retailers. Legitimate users may also have been similarly affected by the impact of regulatory measures on all consumers, such as the need to provide identification and personal details, as well as

[3] Retailer B continued to sell both toxic and non-toxic spray paints.

restricted access to products, all of which may have contributed to the decline in overall sales.

It is also possible that due to the subjective record keeping of staff at two different stores, the significant reduction in overall spray paint purchases could be an indication that more of the overall sales were for intoxication purposes than were labeled as suspicious. There appeared to be no evidence, anecdotal or otherwise, that the reduced-toxicity spray paints were less effective for legitimate uses — painting — than previous toxic versions, although this remains a possibility to explain the reduction in overall sales.

Given that this large reduction in sales in response to reduced-toxicity paints is based on data collected from one store over a fairly short space of time, an immediate response would be to repeat the method of record keeping in other spray paint retailers, following the total or partial substitution of aromatic paints for reduced-toxicity spray paints. This should be supplemented with retailer, staff and consumer surveys and interviews, in order to strengthen the data. Further measures for improving the suspicious sales indicator should be considered.

However, the decrease in sales of spray paints and suspicious sales did not result in a shift to other retailers, suggesting that either the use of spray paint as an inhalant became less popular as the paints became more difficult to access at the major retailer, or substance misusers were able to access spray paints from another undetermined source. The sales records from retailer B suggest that perhaps the use of spray paints became less popular as their accessibility became more difficult, as although retailer B continued to sell aromatic spray paints and did not have a total reduced-toxicity spray paint substitution, there were no suspicious sales recorded in 2007 or 2008. As 2007 was the year in which aromatic spray paints were no longer available at retailer A, it might have been expected that suspicious sales, or overall sales would be significantly increased at retailer B. This however did not appear to be the case, with general sales in retailer B falling by more than 74%.

The close contact that CAYLUS maintains with community members and other community agencies means that it is one of the first points of contact when paint cans, glue packets and other sniffable materials are found, and is made aware of any incidents of sniffing that may occur in town and in local areas (CAYLUS 2007a). From this perspective, if there had been a significant increase in sales of aromatic spray paints in other spray paint retailers in Alice Springs, or an increase in paint sniffing detritus found around town, it is almost impossible that CAYLUS would remain oblivious, as they would be contacted in order to formulate appropriate responses and coordinate with retailers — a very useful monitoring process (CAYLUS 2008, pers. com.). As previously discussed, the initial buy out of aromatic spray paints was in response to reports, and discussions with retailers and other community workers in Alice Springs, that paint sniffers were purchasing their paints from retailer A (CAYLUS 2007a).

However, deciding whether an individual is purchasing spray paint for possible inhalant use or other suspicious activity is an extremely subjective practice, likely to be influenced by a variety of external factors. This includes the heightened awareness of inhalant abuse in Alice Springs in 2006, as well as the CAYLUS' interest in, and visits to, both retailers. As such, the dramatic increase in recorded suspicious sales in 2006 at retailer A may be due in part to an over anxious spray paint retailer. However, as overall sales increased in a similarly dramatic trend in that particular year, commonsense dictates that it is likely that suspicious sales were likewise amplified.

This paper presents the results from a study that has explored the changing habits of volatile substance purchases, and supply management retailer coordination. Although the data was not collected under rigorous scientific research design methods, the results generated from the substitution indicate that the implications are two-tiered, and related to supply management and demand.

First, given the dramatic decrease in overall and suspicious sales by both retailers following the introduction of reduced-toxicity spray paints, a prudent policy response would be to continue limiting the supply of substances that could be misused for intoxication. As previously discussed, the inherent difficulty in regulating the supply of licit substances lies in the genuine need for the substance by the wider population. Spray paint manufacturers have been able to modify their products and remove toxic substances that provide an intoxicating effect when inhaled.

Similarly, the manufacturers of Opal fuel were able to limit the amount of euphoria-inducing hydrocarbons such as benzene, toluene and xylene in their petrol, leading to a less intoxicating fuel (AE 2006; ADAC 2004). As a result, petrol sniffing in Alice Springs and in remote areas has been significantly reduced, due to the inaccessibility of the substance through supply reduction (CAYLUS 2008, pers. com.). In 2008, it was found that Opal fuel had significantly contributed to a 94% decline in petrol sniffing in Central Australia (d'Abbs and Shaw 2008), which in 2004 was estimated to have 350 chronic, persistent sniffers and 30 communities severely affected by petrol sniffing (LANT 2004). Opal fuel was introduced as a replacement for Avgas under the Federal Government's COMGAS scheme in 2005, and is the most commonly used unleaded fuel across Central Australia (AE 2006; ADAC 2004).

However, when substitution of a reduced-toxicity alternative to a toxic substance is not possible, it falls to the retailer to provide a responsible sale of service and deny goods to those who might misuse the substance. A proactive policy response would be to ensure that retailers are made aware of the possible ways in which volatile substances they are responsible for selling may be misused. Recording and monitoring every sale and suspicious sale of the many volatile substances is impossible on a practical level; however, these issues should be the focus for substances that may be more easily accessible than others. Volatile substances are easily accessible and affordable, and the importance of opportunity for substance misuse cannot be overlooked.

Although limiting the supply of toxic spray paints through the introduction of reduced-toxicity spray paints seems to have the effect of reducing the purchase of spray paints for inhalation purposes, and a potential reduction in harm, in general, volatile substance users will inhale any available substance (NIDA 2005). As such, individuals who once purchased spray paints for chroming, may have replaced spray paint with a more readily accessible volatile substance, such as petrol or glue. Addressing the possibility of substance displacement with a combination of supply- and demand-reduction strategies invariably will require external support and coordination between retailers, and CAYLUS, the community organisation involved in this study, is ideally placed to continue administering such support and coordinate a broader, multi-agency approach.

As discussed in the beginning of the paper, there is a lack of reliable retailer data relating to reduced-toxicity spray paints and aromatic spray paints. As the majority of stores who retail spray paints employ a number of casual staff who work at these stores after school and on holidays, many retailers have high turnover of staff with questionable training (despite CAYLUS's best efforts though their responsible retail of solvents program), who may lack the confidence or experience to identify a suspicious sale (CAYLUS 2008, pers. com.).

Due to the discretionary nature of 'suspiciousness', and the fact that this data was collected as a tool to estimate the number of sales and suspicious sales as determined by the retailer, and not as part of a research method, theis data can only paint a picture of current and past figures of spray paint misusers and purchasers in Alice Springs. The data collected also demonstrates the community and retailer liaison work that is currently being undertaken by CAYLUS and other community agencies to address issues of supply in Alice Springs. It illustrates the difficulty in collecting accurate figures. Although indicating a general sales pattern following the substitution of reduced-toxicity spray paints for aromatic spray paints and drawing some possible conclusions, it highlights the need for accurate figures following a similar substitution.

This data also suggests that there may be a risk that reduction strategies within stores has a negative impact on the legitimate users of paint products, and that consumers are deterred from purchasing spray paints. Therefore, community agencies such as CAYLUS need to be sensitive to the possibility that retailers incur some of the cost of implementing prevention strategies within their stores, and are aware that a respectful and sensitive working relationship may be needed to keep retailers involved with reduction strategies.

This paper has illustrated how the studies of problematic substance abuse need to go beyond the examination of criminal law, and appreciate the complexities of supply control and demand regulation, particularly when the misused substances are legal products with other conventional uses. The criminal justice sector has responded to issues of misuse through the creation and broadening of police powers rather than criminal offences, under the umbrella of a harm minimisation approach. This in turn has led to the community sector responding to volatile substance misuse with CAYLUS becoming an empowered public interest group, whose role has become a crucial and institutionalised part of the regulation process (Ayres and Braithwaite 1992).

References

ADAC (Australian Drug and Alcohol Council) (2004) 'An Evaluation of the COMGAS Scheme', Commonwealth Department of Health and Ageing, Canberra

AE (Access Economics) (2006) 'Opal Cost Benefit Analysis', Report prepared for The Opal Alliance, 23 February 2006

Ayres, I and Braithwaite, J (1992) *Responsive Regulation: Transcending the Deregulation Debate*, Oxford University Press, UK

CAYLUS (Central Australian Youth Link Up Service) (2007a) *December Newsletter*, <http://www.tangentyere.org.au/index.html> at 30 September 2008

CAYLUS (2007b) 'About CAYLUS', Unpublished Report

CAYLUS (2008) 'Submission to the Inquiry into Petrol Sniffing and Substance Abuse in Central Australia', July 2008

Clarke, RV (1983) 'Situational Crime Prevention: Its Theoretical Basis and Practical Scope', *Crime and Justice*, vol 4, pp 225–56

d'Abbs, P and MacLean, S (2008) 'Volatile Substance Misuse: a review of interventions', National Drug Strategy Australia, Monograph series no 65

d'Abbs, P and Shaw, G (2008) Executive Summary of the Evaluation of the Impact of Opal Fuel, Commonwealth Department of Health and Ageing, October 2008

Delahunty, B and Putt, J (2006) 'The Policing Implications of Cannabis, Amphetamine and Other Illicit Drug Use in Aboriginal and Torres Strait Islander Communities', NDLERF (National Drug Law Enforcement Research Fund), Monograph Series nos 15 and 15A

Gray, D Shaw, G D'Abbs, P Brook, D Stearne, A Mosey, A Spooner, C (2006) 'Policing, volatile substance misuse, and Indigenous Australians', NDLERF (National Drug Law Enforcement Research Fund), Monograph series no 16

LANT (Legislative Assembly of the Northern Territory) (2004) 'Petrol Sniffing in Remote Northern Territory Communities', Select Committee on Substance Abuse in the Community, Darwin, October 2004

Lubman, DI Hides, L and Yucel, M (2006) 'Inhalant Misuse in Youth: Time for a Coordinated Response', *Medical Journal of Australia*, vol 185, no 6, pp 327–30

MacLean, S (2003) '"Just a dirty kind of drug": Young People's Perceptions of Chroming', Paper presented at the Inhalant Use and Disorder Conference convened by the Australian Institute of Criminology, Townsville 7–8 July 2003

MacLean, S (2005) 'It Might be a Scummy-Arsed Drug but it's a Sick Buzz: Chroming and Pleasure', *Contemporary Drug Problems*, vol 32, pp 295–318

MacLean, S (2008) 'Chrome World, Chrome Magic', Turning Point Alcohol and Drug Centre, <http://www.inhalantsinfo.org.au/uploaded_files/fck/Chrome%20World.pdf> at 27 September 2008

Modell, JG Glasser, FB Mountz, JM Schmaltz, S Cyr, L (1992) 'Obsessive and Compulsive Characteristics of Alcohol Abuse and Dependence: Quantification by a Newly Developed Questionnaire', *Alcoholism: Clinical and Experimental Research*, vol 16, no 2, pp 266–71

Mosey, A (1997) 'Report on Petrol Sniffing in Central Australia', Central Australian Alcohol and Other Drugs Program, Territory Health Services, Alice Springs

NIDA (National Institute on Drug Abuse) (2005) 'Research Report Series: Inhalant Abuse. US Department of Health and Human Services', MD, Bethesda. <http://www.drugabuse.gov/ResearchReports/Inhalants/Inhalants.html>, at 2 October 2007

NIIS (National Inhalant Information Service) (2008) 'About Inhalants', <http://www.inhalantsinfo.org.au/about_inhalants.php>, at 25 September 2008

VDHS (Victorian Department of Health Services) 2007 'About Inhalant Abuse' <www.health.vic.gov.au/drugservices/downloads/in_commdev.pdf> 8 October 2007

White Knight (2005) 'Low Tox Aerosol', <http://www.whiteknightpaints.com.au/bright_idea/view/low-tox-aerosol> at 25 September 2008

White, V Hayman, J (2004) 'Australian Secondary Students Use of Over-the-Counter and Illicit Substances in 2002' Australian Government Department of Health and Ageing, Canberra