

**PART THREE:
FROM INTERVENTIONS
TO STRATEGIES**

11 From interventions to strategies

This review has examined evidence relating to specific interventions that have been employed in attempts to prevent and/or manage various forms of VSM in various settings. No single intervention is likely to provide an adequate response to a phenomenon that has as many contributing causes as VSM (or, for that matter, to any other form of drug use). An essential ingredient of any strategy to address VSM is a suite of interventions, each tailored to realistic and appropriate objectives. But even a suite of interventions, in itself, does not constitute a strategy. Conceptually, the interventions should sit within a framework of other components.

Because this review is neither a policy manual nor a community development handbook, we do not explore these other strategic components, but in concluding the review, we shall say a few words about the place of interventions within a strategic framework. We begin by considering the respective roles of particular kinds of interventions, and then relate interventions to other elements of a strategy.

11.1 Understanding the determinants of VSM-related harm

The manner in which mind-altering substances such as inhalants are used in any social context and the consequences of these usage patterns are a product of the interrelated effects of three sets of variables: pharmacological-toxicological properties of the *substances* concerned; attributes of individual *users*, such as their personalities, physical health, and expectations associated with drug use; and characteristics of the *environment* in which use takes place, such as availability of the substance, and proximity of locales to roads, traffic and/or police facilities (Zinberg, 1984). No single factor, taken by itself, provides an adequate framework for explaining the use and effects of a mind-altering substance on users, their families or their community.

It follows from this model that no intervention strategy is likely to reduce VSM and its associated problems unless it addresses a range of factors, and their interrelated effects. For example, if you take away the drug (e.g. by substituting non-sniffable Opal fuel for sniffable petrol) without considering the setting in which sniffing takes place (e.g. opportunities for young people; alternative activities), or the needs which young people have been attempting to satisfy by sniffing petrol in the first place (e.g. a sense of power and/or excitement), then the chances are that at least some of those young people will go searching for another drug. Similarly, residential rehabilitation programs focus attention on reducing demand for VSM on the part of users (or ‘set’, in Zinberg’s terms), and may provide temporary respite for sniffers’ families and even the community, but they do not, in themselves, address any of the problems in the setting that contributed to those users’ VSM in the first place.

This does not mean that a single program must attempt to bring about change in all three domains, even if it could do so. But it does mean that any intervention strategy, of which particular programs will form a part, must begin by identifying the factors in each of these three domains that shape the usage patterns and consequences of VSM in the community concerned,

and then considering how particular interventions might contribute to changes in the drug, set and/or setting.

11.2 Interventions altering the properties of volatile substances

The best known and documented VSM interventions altering the properties of the drug itself have been the use of Comgas aviation fuel as a substitute for unleaded petrol and, more recently, the introduction of Opal non-sniffable vehicle fuel. A 2004 evaluation of the Comgas scheme (Shaw et al., 2004) found that, in communities sufficiently remote to be insulated from multiple outlets, and where the communities themselves made a sustained commitment to using Comgas, petrol sniffing fell and remained low. The scheme, moreover, enjoyed popular support. Opal came into communities from early 2005, and anecdotal reports suggest that it too has led to a decline in petrol sniffing. In December 2007 the Department of Health and Ageing commissioned an independent evaluation of the impact of Opal, which is expected to be completed by mid 2008.

In making Opal available in Aboriginal communities, the Australian Government has encouraged communities to implement other measures besides Opal, in recognition of the fact that, by itself, removing the supply of one drug (sniffable petrol) will not, of itself, alter demand for recreational drugs. As stated above in section 5.2, under the Petrol Sniffing Prevention Program (PSPP), the government has also incorporated the Opal rollout into an Eight Point Plan which provides for additional resources in areas such as policing and rehabilitation.⁷ One of the objectives of the independent evaluation of the Opal rollout will be the extent to which the use of Opal fuel has been incorporated into broader community-based VSM strategies.

Other attempts to reduce VSM by altering inhalants have proved less effective. The addition of ethyl mercaptan (also known as ‘skunk juice’) to petrol in several Arnhem Land Aboriginal communities in the 1980s was shown to be ineffectual for several reasons, one being that sniffers did not take long to learn that simply leaving the modified petrol out in the sun for a short time would cause the additive to evaporate. More recent research conducted by the CSIRO found that other forms of mercaptan would not have been so easily removed once added; however, the National Inhalant Abuse Taskforce (NIAT) has recommended against their use in view of the unacceptably high level of sulphur emissions entailed (National Inhalant Abuse Taskforce, 2006).

In 2004, the Australian Government Department of Health and Ageing funded the Victorian Department of Human Services to commission research aimed at assessing the potential applicability of product modification as a VSM prevention strategy. The Victorian Department in turn engaged two research teams: one from CSIRO to examine the technical feasibility of modifying inhalants without detracting from their performance or attractiveness to consumers, and a team comprising d’Abbs, MacLean and Robertson to examine the likely behavioural impact of modifying inhalants on users. Findings from both projects were subsequently considered by the NIAT (National Inhalant Abuse Taskforce, 2006) in its proposed national policy framework.

⁷ Further information about the Eight Point Plan can be found at www.health.gov.au/petrolsniffingprevention.

NIAT reported that:

1. While Opal appeared to be an effective product, other methods of preventing petrol sniffing by adding deterrents to unleaded petrol should not be pursued.
2. The addition of deterrents to butane and other gases was technically feasible but subject to practical difficulties, and required further research.
3. Reformulation of aerosol spray paints by reducing toluene levels, as already introduced by Barloworld, warranted further examination.

On the behavioural side, NIAT noted that product modification of inhalants was more likely to influence experimental or occasional sniffers rather than chronic sniffers, and that, depending on availability of alternative drugs, it might lead to substitution of other, possibly more harmful, drugs.

Anecdotal reports from Alice Springs, of a switch by retailers to selling low-toxicity spray paints only, are a promising indicator of the limited but real benefits attainable from judicious use of ‘drug’-based interventions.

11.3 Interventions targeting users and their families

The majority of interventions described in the previous chapter focus on fostering change in individuals and occasionally also their families so that they no longer seek intoxication through VSM. Such an approach relies, in the main, on assisting drug users to decide they wish to cease VSM and then supporting them to maintain this resolve. Interventions of this kind need to be complemented by measures which alter the social contexts in which people use drugs (for instance, providing other things for them to do), as well as measures to restrict the availability of intoxicating substances.

VSM in urban contexts generally occurs among young people who are acutely socially marginalised; for instance, prevalence is often higher among those involved with the child protection or juvenile justice systems. It makes sense, then, that measures to reduce the isolation, deprivation and lack of opportunity experienced by these young people are likely to impact on their substance misuse.

Education on the harms associated with VSM is provided in occupational health and safety rather than drug education curriculum in Australian schools, due to concern about alerting young people to the possibility of VSM. Where aimed at people who already misuse volatile substances, programs should focus on effects (such as decreased fitness) which are likely to be of immediate concern to young people, rather than on more dramatic risks such as that of premature mortality. Educational interventions are valuable where they promote caring and coping capacities within the community, rather than spread alarm and despondency; are culturally appropriate; occur in conjunction with other interventions aimed at reintegrating young people with their families and the community; and are evaluated. Programs relying on scare tactics are likely to be counter-productive.

VSM drug treatment is frequently provided in the form of counselling, although the literature questions how effective such approaches can be with very young people or those who have sustained neurological damage. Some authors have argued that family interventions show promise in treating VSM, in both Indigenous and non-Indigenous contexts.

New residential rehabilitation services are under development in South Australia, Victoria and the Northern Territory. Little clinical literature is available to guide treatment practitioners or those designing programs. Residential rehabilitation for VSM also raises a number of difficult issues. The first concerns treating the person outside of his or her setting. In the absence of follow-up intervention in that setting, the effectiveness of such programs appears to be very limited. A second issue concerns the theoretical models underlying rehabilitation: to what extent are residential models which have been developed primarily in the context of adult substance misuse among urban, Western societies appropriate for young (often Indigenous) people? How might VSM-specific services address clients' poly-drug use? Client outcome studies of Canadian VSM residential treatment programs indicate that different service models vary considerably in their effectiveness and that a relatively high non-completion rate might be anticipated. Given the high cost of residential rehabilitation compared with other community approaches, it is important that outcomes of new Australian services be evaluated.

Outstations or homelands have an important role to play in combating petrol sniffing. However, such measures should not focus exclusively on the drug users and ignore the community. Outstation programs may assist in the rehabilitation of some young people and certainly provide a restorative break from the practice; however, most will return to sniffing if complementary changes have not been made in the home community. The range of programs run at Yuendumu provide an excellent example of a comprehensive approach involving provision of preventive recreational activities, intervention and after-care (Preuss & Napanangka Brown, 2006; Stojanovski, 1999).

Where homeland centres or outstations are used in addressing VSM they need to be adequately resourced with proper access to medical support, first aid training, telecommunication facilities and funding to employ staff and provide essentials such as food. Funding models must be flexible to account for periods when, for whatever reason, they do not operate. Homeland centres or outstations are not appropriate places to send seriously disabled or unstable young people, and individuals must be appropriately assessed before being sent to isolated locations. Finally, they need to provide a meaningful program of activities, cultural or otherwise, to engage young people's interest.

Outstation programs depend on the ongoing commitment of a family group. They appear to be most successful in helping young people with family ties to the land on which they are based. Many people do not have access to an outstation to which to send their children or, where they do, funding to sustain it.

Culture, paintings and ceremonies may well act as a prevention measure against petrol sniffing, but cannot be harnessed to perform this function in the service of non-Aboriginal judicial or other systems.

Most of the responsibility for care of chronic and disabled sniffers falls to families, with much-needed physiotherapy and other allied health services in short supply in remote communities. Little is written on the fate or care of young people in urban areas who become brain damaged through VSM.

Incarceration does not appear to help young people desist from VSM, other than by enforcing a break for both users and their communities. However, new NT legislation enables magistrates to sentence people to mandatory treatment. Again, it will be important to evaluate this measure carefully.

Measures aimed at reducing the harm associated with VSM should be adopted as a matter of course, particularly in the form of education provided to established or chronic users of volatile substances. Harm reduction education should be adopted in addition to, rather than as a substitute for, other intervention measures aimed at bringing about a cessation of VSM.

11.4 Interventions altering the environments in which VSM occurs

Any strategy to reduce VSM must address the setting in which VSM is liable to occur; that is, it must look to the range of opportunities and constraints that present themselves to young residents, especially the opportunities for rewarding and exciting activities, and the forms of support available to families in which VSM occurs. The potential accessibility of other drugs to which young people using volatile substances might inadvertently be diverted by any intervention should also be considered.

Our review has revealed three main ways of altering the setting in which VSM takes place:

- restricting availability of inhalants;
- providing recreational, training and/or employment programs;
- imposing legal sanctions, and/or community-based sanctions.

Most attempts in remote Aboriginal communities to prevent petrol sniffing by locking-up petrol supplies (generally dating from before the Comgas and Opal schemes came into effect) failed in the face of the remarkable ingenuity of some sniffers in circumventing them. In urban settings, negotiated agreements under which retailers have agreed to take popular inhalants off the shelves have formed an important part of community-based VSM strategies, although the extent to which these measures have contributed to a decline in VSM is often difficult to gauge. As pointed out earlier in the review, several Australian states/territories have now introduced legal restrictions on selling particular types of inhalants to persons aged under 18 years. Again, the impact of these measures has not been assessed.

Recreational programs have been part of many successful strategies and have a useful primary intervention role to play, provided they meet the conditions set out above, namely: that staff are sensitive to the needs of the community and provide a range of programs (not just football) that are genuinely engaging and exciting, and provide opportunity for risk-taking; that activities be available during after-school hours, at evenings and weekends, and during school holidays; that drug users are encouraged to take part, but not given preferential treatment; and that activities for girls and young women be included in the program, alongside (in Indigenous community settings) opportunities for initiated young men to engage in separate programs if they prefer.

Innovative models for VSM diversion have emerged in both remote and urban/rural settings, for instance involving risk-taking, performance, group work and engagement with media technologies. Some recent programs in Indigenous communities have entailed training community members as youth/recreation workers, and if ongoing support is provided, this is a sensible move. Recreation programs are, however, of limited effectiveness on their own, particularly where VSM is widespread and chronic and in these instances should not comprise the principal part of any strategy.

Along with training opportunities, appropriate schooling may act as a diversion from VSM. Young people with a history of VSM who have left school and wish to return may require supportive re-entry options. Secondary education options remain very limited in Australian remote communities. Employment options that engage young people can make VSM relatively less attractive and may foster a sense of optimism about the future.

We have referred several times to the use of the Community Development Employment Program (CDEP) scheme in creating employment opportunities for anti-VSM activities in Indigenous communities, such as the Jaru Pirrjirdi program at Yuendumu, where young adults are paid CDEP money to run a diversionary program of activities for young people. In 2007 the Commonwealth Government announced that it proposed to shut down the CDEP scheme. At the time of writing (August 2007) it was not clear what impact this decision would have on community initiatives such as Jaru Pirrjirdi.

Adequate educational, training and employment opportunities are of course essential components of any functional community or region, regardless of the contribution they may or may not make to preventing VSM, and they should be fostered for this reason. At the same time, it should be borne in mind that such measures rarely reach chronic sniffers, whose distinctive needs must be addressed separately.

In recent years several Australian jurisdictions have amended police powers to intervene in VSM episodes. This has been achieved using a 'civil apprehension' approach rather than by making VSM a criminal offence. Police now have authority to confiscate inhalants and related equipment, and apprehend non-adult inhalant users and release them into the care of a suitable person or a 'place of safety'. These amendments have undoubtedly removed some previous impediments to police action and helped to clarify the role of police with respect to VSM. In

themselves, however, they do not guarantee an adequate or satisfactory policing response. In remote areas in particular, containment of VSM requires an adequate police presence on the ground. In both remote and urban/regional settings, statutory power to intervene tends to be meaningless unless police have access to appropriate short-term custodial options for young people intoxicated from inhalants.

Statutory police powers can be complemented by community-based warden schemes and night patrols, provided that the latter receive adequate funding to train staff and maintain the service. In the short term, warden schemes and night patrols can reduce VSM-related vandalism and other harms; in the longer term, they can enhance a community's sense of its own capacity to respond to VSM. Once again, however, these measures also highlight the need for other interventions. Returning sniffers to their families, for instance, is likely to have little effect unless those families in turn receive assistance in working with sniffers.

The role of providing education on VSM recognition and intervention to professional staff and, in some instances, family members is far less contentious than that of educating young people about VSM. Research from the UK indicates that an education campaign targeting the whole community was associated with a gradual decline in VSM, a trend which reversed once the campaign was over.

Harm reduction approaches which entail measures to make the settings in which VSM occurs less risky are extremely contentious. The practice, for instance, of supervising chronic volatile substance misusers within care or treatment facilities to monitor their safety, rather than removing cans or forcing them to leave, is banned in Victoria. However, given the high risk that even isolated episodes of VSM can have serious, including fatal, consequences, harm reduction measures should not be dismissed for fear of arousing controversy.

11.5 The place of interventions in a VSM strategy

Interventions form an essential part of any strategy to combat VSM—but only a part. The development of a strategy involves a number of steps:

- identifying and describing a problem or problems;
- clarifying and prioritising objectives;
- identifying resources available, and resources needed, in order to pursue those objectives;
- selecting the best interventions for pursuing prioritised objectives;
- implementing the interventions;
- identifying and addressing barriers to implementation that arise in the course of the program;
- identifying and addressing unforeseen consequences;

- monitoring implementation processes and outcomes;
- feeding-back information obtained to relevant stakeholders; and
- modifying the strategy in light of information gathered.

How each of these steps is undertaken is no less important than *what* is decided. For example, whose voices are heard (and whose not heard) in identifying problems and objectives? As mentioned earlier, it is beyond the scope of our review to explore these additional components of a strategy. An extensive policy literature and community literature is available. For those planning a community-level strategy, three resources are relevant:

1. One of the four volumes in the Aboriginal Drug and Alcohol Council (ADAC) kit *Petrol Sniffing and other Solvents: a Resource Kit for Aboriginal Communities* (Aboriginal Drug and Alcohol Council (SA) Inc, 2000) provides step-by-step advice on community development approaches to VSM.
2. A version of this resource produced for use in Victorian Indigenous communities (State Government of Victoria, 2003).
3. A report, obtainable from the internet, prepared by the Queensland Government Commission for Children and Young People (Commission for Children and Young People, 2002) describes past community-based approaches and outlines a seven step process for communities concerned about VSM.

Programs are best developed to suit specific contexts and therefore cannot be exactly reproduced elsewhere; however, factors which are believed to have led to their success can be kept in mind by others wishing to do similar work. Shaw et al. (2004, p. 64) stress that the best way to determine the most appropriate approach for any particular community is through a process of consultation and assessing community strengths: ‘it is the community itself that works this out most efficiently’. While successful anti-petrol sniffing programs are inevitably those which enjoy the leadership and support of Aboriginal people themselves, many such interventions also require government support to be sustainable. There needs also to be mechanisms in place for the sharing of information between and within communities so that people are aware of what has been successful in the past.

Less experience in responding to VSM in urban settings is available compared with remote Indigenous communities. No supply-reduction measure equivalent to Avgas and Opal is available for spray paint, butane gas, deodorants or glue—the VSM products most commonly used outside remote communities. Moreover, even if a non-sniffable alternative for these products were to be developed, other substances subject to VSM would remain available. Nonetheless, in recent years many community programs have been developed in localities across Australia, often involving elements such as educating retailers about VSM, visiting VSM ‘hotspots’ and ensuring an integrated service response. The majority of urban programs reviewed here

have received only short-term funding, making it difficult to implement long-term preventive strategies.

This review demonstrates that when communities have been successful in doing something about VSM, a number of conditions have been present. First, there has been sufficiently strong community resolve for families and community decision-making structures to act cohesively in deciding on and supporting strategies, and community members and key agency representatives have been actively involved in implementing them. In remote communities both Indigenous and non-Indigenous authorities must support the intervention. Second, not just one or two interventions have been introduced but a range of concurrent activities affecting the drug, the users and the social setting in which VSM occurs. We have seen that VSM is very difficult to eradicate permanently, and no individual intervention should be judged unsuccessful for failing to stop sniffers across the continuum of use, or for all time.

11.6 Concluding thoughts

Since the first draft of this review was prepared as an internal departmental document in the Northern Territory in 1989, revised and published in 2000 and now, in 2007, updated and expanded in scope, responses to VSM have changed in several ways. Prior to the beginning of the 21st century, governmental responses were largely restricted to making the occasional one-off grant to non-government agencies, often in reaction to a media-driven crisis. Coordination between the Australian and state and territory governments was almost non-existent, almost no interventions were evaluated, and the corporate sector was nowhere to be seen. Since then, we have seen not only a significant expansion of governmental resources devoted to VSM, but also the emergence of co-operation between governments and a commitment to a coherent VSM policy framework, culminating in 2006 in the adoption of a new policy set out in 'National Directions on Inhalant Abuse' (National Inhalant Abuse Taskforce, 2006). The role of BP Australia in developing Opal fuel, and of Barloworld Coatings in designing and marketing low-toxicity aerosol paints, demonstrate the important part that the corporate sector can play in combating VSM.

Yet much remains to be done, by governments, researchers, and by communities. We need, for instance, to look thoughtfully at whether current policy directions (such as the funding of residential rehabilitation treatment programs) are an appropriate and cost effective response to VSM in Australia. Product modification strategies to reduce the toxicity of VSM substances commonly used in cities and towns must be explored. Harm reduction features only rarely in Australian responses to VSM. Given the acute nature of health risks associated with VSM, harm reduction deserves further consideration, particularly for established users.

Welcome though some changes are, VSM remains something of a 'poor cousin' to other forms of drug use in drug and alcohol policy and intervention. The prevention and treatment literatures remain slight compared to those addressing other forms of substance misuse. To date, little research considers, for instance, to what degree the treatment approach to VSM should differ from that

employed in responding to other drugs. There is little point in assisting someone to cease VSM if it is immediately replaced by other harmful practices such as injecting drug use. How might poly-drug use including VSM be addressed? Much of the education provided to volatile substance users concerns the possibility of sudden sniffing death, based on its incidence in the UK. Australian national VSM-associated morbidity and mortality data would assist in determining whether our patterns of VSM and product preference result in a different range of harms.

Even today, too few Australian programs are evaluated or reviewed. Many programs would benefit from evaluation that is sensitive to the aims of those involved, and to the constraints under which the programs operate. We note here that very few evaluations of VSM programs in urban areas are available. The reported experiences of other countries in addressing petrol sniffing can also usefully inform Australian initiatives, although they cannot be assumed to be directly transferable.

Finally, we should not lose sight of the relationship, in both Indigenous and non-Indigenous communities, between socio-economic disadvantage and VSM. We believe that the most effective strategies for combating substance misuse, including VSM, are those that improve young people's lives and the health and wellbeing of their families and communities. Working with young people to enhance their opportunities, identify and fulfil their potential capacities in a spirit of confidence, optimism and resilience, creates the conditions under which people are most likely to make their own decision not to misuse inhalants or any other drugs.

11.7 Summary

- Interventions are an essential component of any VSM strategy—but do not in themselves constitute a strategy.
- This review demonstrates that when communities have been successful in doing something about VSM, a number of conditions have been present. **First, there has been sufficiently strong community resolve for families and community decision-making structures to act cohesively in deciding on and supporting strategies, and community members and key agency representatives have been actively involved in implementing them.**
- **Second, not one but a range of interventions must be put in place. The ways in which mind-altering drugs, including volatile substances, are used in any given context, and the consequences of those usage patterns, are a product of the inter-related effects of three factors: pharmacological-toxicological properties of the drug; attributes of the drug user; and aspects of the social and physical environments in which drug use takes place (Zinberg, 1984). Strategies against VSM are most likely to be effective when they comprise interventions designed to influence each of these three factors.**
- Interventions addressing VSM are too rarely critically evaluated. Sensitive program evaluation is essential to ensure a rational deployment of effort and allocation of resources.

- Two highly successful interventions entailing altering properties of the drug are the substitution of aviation fuel and then Opal for sniffable fuels in selected remote communities. The development of measures to alter the properties of volatile substances other than petrol would support anti-VSM activities in urban and rural areas.
- The majority of VSM interventions have focused on individual users and/or their families. These include education, counselling, residential treatment, removal of sniffers to homeland centres or outstations, and some harm reduction measures. These interventions have a useful role to play but need to be complemented by other measures to reduce the availability or toxicity of substances and provide an environment where VSM becomes less attractive to potential misusers.
- Three main ways of changing the settings in which VSM occurs are identified:
 - restricting the availability of inhalants;
 - providing recreational, training and/or employment programs;
 - imposing legal sanctions and/or community-based sanctions.
- Although more resources are available today for VSM interventions, and although governments in Australia have committed themselves to a national policy framework for addressing VSM, many interventions even today are not evaluated, and the quality of morbidity and mortality data on VSM remains deficient.
- Ultimately, the most effective interventions into VSM are likely be those activities that redress social and economic disadvantage and enhance the opportunities, capacities and confidence of young people.

