



Consensus-Based Clinical Practice Guideline

FOR THE MANAGEMENT OF VOLATILE SUBSTANCE USE IN AUSTRALIA

2011



Working to build a healthy Australia



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Clinical Practice Guideline
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IN AUSTRALIA

WORKING TO BUILD A HEALTHY AUSTRALIA

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Paper-based publication

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Disclaimer

This document is a general guide to appropriate practice, to be followed subject to the clinician's judgement and patient's preference in each individual case. The guideline is designed to provide information to assist decision-making and is based on the best available evidence at the time of development of this publication.

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Special terms used in this document

Some of the following terms may have different meanings in other contexts. This list indicates the meaning intended within this guideline.

Acute intoxication	A person's condition minutes or hours after inhaling a volatile substance, while they are most affected by the substance and behaving as if drunk or 'out of it' (e.g. unsteady on their feet, unable to talk normally or falling asleep)
Activity programs	Programs that help people develop skills for living (including thinking clearly, social skills, work skills, emotional skills and recreation), by getting involved in useful activities instead of using harmful substances
Acquired brain injury	Brain damage that a person was not born with (e.g. caused by an accident or using harmful substances)
Brief intervention	Any short (e.g. a few minutes) unplanned action taken by a health worker, when the opportunity arises, to reduce a person's risk due to volatile substance use (e.g. talking about the harmful effects of volatile substances and getting the person to think about making changes to improve their health)
Case management	A system for caring for a person with complex healthcare needs, which aims to keep them in touch with all the services they need to be as healthy as possible
Clinical setting	A health service or organisation where medical or health care is provided by trained or experienced healthcare workers. In this guideline, non-clinical settings include facilities that are not primarily healthcare services, but may employ healthcare workers (e.g. nurses, Aboriginal health workers, Ngangkari, alcohol and other drug workers and allied health professionals including mental health workers)
Clinicocultural interventions	Clinical interventions developed for specific cultural groups and which deliberately foreground cultural elements or considerations as integral components of care
Chronic substance use	Long-term regular use, which can include daily use
Cognitive-behavioural therapy	A type of psychological therapy that is used to treat a wide range of problems, including substance abuse, by helping people change negative thoughts, feelings and behaviours into positive and healthy thoughts, feelings and behaviours
Cognitive function	Ability to think properly, which can be impaired by brain damage caused by inhaling volatile substances
Cultural competency	Ability of healthcare services to work effectively when healthcare providers are from a different cultural background from the people who use their services. In Australia, this term usually refers to healthcare services organised to provide good care for Aboriginal and Torres Strait Islander peoples

Cultural security	The safety that is achieved when healthcare services are run in a way that respects the cultures of people who use the service and supports their rights, views and expectations. In Australia, this term usually refers to systems that are good for Aboriginal and Torres Strait Islander peoples
Education	(See <i>Health education</i>)
Family-inclusive practice	A form of therapy that involves substance use treatment approaches and family therapy. Components can include family counselling, provision of information about substance use and treatment (tailored for families), referrals to other agencies for information or support and mediation
General counselling	A non-directive approach to psychotherapy based on the theory that, through reflecting on their thoughts and feelings, a person is able to understand the causes of their problems and find their own solutions
Group therapy	A form of therapy in which one or more therapists work with a small group of individuals. This approach provides a forum for group members to share experiences and learn from other's experiences in a supportive environment
Harm reduction	A set of attitudes, policies and actions that aims to help people who use volatile substances reduce risk to themselves and others, even though they might continue to use
Health education	The process of providing people with knowledge, information and skills to keep themselves and their community healthy
Inhaled volatile substance use	Deliberately inhaling substance/s to become intoxicated ('sniffing', 'huffing', 'bagging' or 'chroming')
Intoxication	(See <i>Acute intoxication</i>)
Informed consent	A process undertaken before any medical procedure or treatment begins, to make sure a patient fully understands what the procedure or assessment involves (e.g. benefits and risks of the treatment/ procedure, potential harms if the treatment is not performed) and agrees to receive the treatment or undergo the procedure
Inhalant abuse	(See <i>Inhaled volatile substance use</i>)
Intervention	Any action taken to improve a person's health, including any form of treatment. (In this guideline, 'intervention' does not just refer to an organised action taken by several people at once to help a person whose health is in danger due to substance use.)
Motivational interviewing	A non-confrontational, client-centred style of counselling that is used to help a person change a problem behaviour by building up their ability to motivate themselves
Narrative therapy	A form of therapy that involves gaining insight into a person's understanding of their life and experiences through the use of stories. Narrative therapy explores how a person forms and links stories to make meaning, and operates on the premise that these stories have implications for past, present and future behaviour

Ngangkari	Male or female traditional healer/s of Central Australia ⁱ
Occasional substance use	Irregular use occurring on only a few occasions, including experimental use
Opportunistic substance use	Use of inhaled volatile substances, when available, by a person who also uses one or more other substances (e.g. sniffing petrol on days when unable to afford a more expensive substance)
Outstation rehabilitation	A type of residential (live-in) rehabilitation designed primarily for Aboriginal young people in remote regions of Australia
Peer education	Health education for people who use volatile substances that is provided by people of their own age or cultural group (e.g. ex-volatile substances users)
Peer mentoring	The practice of giving guidance and advice to another, less experienced person from the same cultural group or with other shared experience (e.g. an ex-user or young person giving support and help to a teenager with a VSU problem)
Polydrug use	Using more than one substance, together or on different occasions
Regular substance use	Repeated use of volatile substances on more than just a few occasions
Residential rehabilitation	Live-in treatment and rehabilitation programs for substance use
Storytelling	A form of narrative therapy that is a traditional and culturally appropriate for Aboriginal and Torres Strait Islander peoples
Therapeutic community	A model of care that involves residential care and the use of the community, through self-help and mutual support, to promote behaviour change
Volatile substance	Chemicals that give off fumes at normal room temperature (e.g. solvents, gases and aerosols)
Volatile substance use	(See <i>Inhaled volatile substance use</i>)
Withdrawal syndrome	The symptoms and health effects a person experiences when they are dependant on a substance and then stop using it for a few days
Yarning	A form of narrative therapy that is traditional and culturally appropriate for Aboriginal and Torres Strait Islander peoples
Youth development programs	Activity programs for young people in communities where they are at risk of substance use (See also <i>Activity programs</i>)

ⁱ For a description of the work of Ngangkari, see Ngaanyatjarra Pitjanjatjara Yankunyatjara Women's Council. Ngangkari work – *Anangu way: traditional healers of Central Australia*. Alice Springs: Ngaanyatjarra Pitjanjatjara Yankunyatjara Women's Council Aboriginal Corporation; 2003.

Abbreviations

AVPU	Alert, Vocal stimuli, Painful stimuli, Unconscious [a scale for assessing a person's level of consciousness]
CBR	Consensus-based recommendation
CBT	Cognitive-behavioural therapy
DoHA	Commonwealth Department of Health and Ageing
DRSABCD	Steps in basic life support: Dangers Responsive Send for help Open airway Normal breathing Start CPR (cardiopulmonary resuscitation) Attach defibrillator
DSM	Diagnostic and Statistical Manual of Mental Disorders
EBR	Evidence-based recommendation
ECG	Electrocardiography/electrocardiogram
ICD	International Statistical Classification of Diseases
NHMRC	National Health and Medical Research Council
PP	Practice point
VSU	Volatile substance use

Summary of recommendations

This guideline includes evidence-based recommendations (EBR), consensus-based recommendations (CBR) and practice points (PP).

The recommendations in this guideline were developed by the VSU Guideline Development Committee, a multidisciplinary committee of experts (the committee). The process followed by the committee is described in section 1.6. In formulating the recommendations, the committee considered the findings of a systematic review of evidence undertaken during January–February 2010.

Methods used to develop this guideline are described in detail in Appendix B.

Abbreviation	Type of recommendation
EBR	Evidence-based recommendation – a recommendation formulated after a systematic review of the evidence, indicating supporting references
CBR	Consensus-based recommendation – a recommendation formulated in the absence of quality evidence, after a systematic review of the evidence was conducted and failed to identify admissible evidence on the clinical question
PP	Practice point – a recommendation on a subject that is outside the scope of the search strategy

For each EBR, supporting references are listed and the grade is indicated according to National Health and Medical Research Council (NHMRC) *Levels of evidence and grades for recommendations for developers of guidelines*.¹ The grade indicates the strength of the recommendation in consideration of the strength of evidence, consistency of evidence across studies, the likely clinical impact, and the degree to which the study findings can be generalised and applied in the Australian context. Details of the process followed by the committee when assigning grades for recommendations are shown in Appendix B.

Grade	Description
A	Body of evidence can be trusted to guide practice
B	Body of evidence can be trusted to guide practice in most situations
C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
D	Body of evidence is weak and recommendation must be applied with caution

The following tables provide a summary of the recommendations for the clinical management of VSU. For further information on the evidence that was reviewed when formulating these recommendations, refer to the section indicated. The clinical questions on which the recommendations are based are listed in Section 16.

Recommendation	Type	Section	Page	Clinical question/s
Managing acute intoxication				
Maintaining safety				
Treat the person with respect. Ensure that all your actions and those of staff help maintain the person's dignity as much as possible.	PP	4.2.1	54	N/A
Consider safety issues for the person being cared for, other staff and yourself: <ul style="list-style-type: none"> • If you can smell fumes (e.g. from the person or their clothing), let fresh air into the room and make sure the room is kept ventilated. • If you feel threatened, call the police or other appropriate help. 	CBR	4.2.1	54	1.3
(For non-clinical settings) Using local service protocols, arrange transfer to medical services if the person shows acute behavioural disturbance, has medical problems, is not recovering normally, or if staff feel that the person needs medical care.	CBR	4.2.1	54	1.3
If medication is needed to keep the person safe as part of their care (see section 4.2.3. Medication), follow your local health service's protocols for the use of medicines.	PP	4.2.1	54	N/A

Recommendation	Type	Section	Page	Clinical question/s
Managing acute intoxication				
Emergency care				
<p>Try to calm the person down:</p> <ul style="list-style-type: none"> • Speak to the person in a calm voice and reassure them that they are safe. • Use non-threatening body language. • Take the person to a quiet place (if possible). • Use clear and simple language. • Limit the number of people who are speaking to the person – to avoid confusion. 	CBR	4.2.2	55	1.1
Do not chase a person who has inhaled a volatile substance.	CBR	4.2.2	55	1.1
Avoid physically restraining the person. If restraint is necessary for safety, follow legal requirements and restrictions.	CBR	4.2.2	55	1.1
<p>Manage the situation as an emergency if the person is injured, has collapsed, is unconscious or having a seizure.</p> <p>Follow the DRSABCD steps:</p> <p>D. Check for dangers (see section 4.2.1. Maintaining safety).</p> <p>R. Check for a response (e.g. check whether the person is conscious by asking them to squeeze your hand if they can hear you).</p> <p>S. Send for help (e.g. call an ambulance or contact local emergency services). While waiting for the ambulance/emergency help, perform basic first aid.</p> <p>A. Check that the airway is open by carefully tilting the person's head back and gently lifting the chin forward. Clear the airway if it is blocked.</p> <p>B. Check if the person is breathing.</p> <p>C. Commence cardiopulmonary resuscitation if there are no signs of life. Give 30 chest compressions (two compressions per second) followed by two breaths.</p> <p>D. If the person doesn't respond, use defibrillator if available.</p>	CBR	4.2.2	55	1.1

Recommendation	Type	Section	Page	Clinical question/s
Managing acute intoxication				
Medication				
Most cases of acute intoxication due to VSU can be managed by removing the substance and letting the person rest. Sedatives should only be used if necessary for acute behavioural disturbance.	CBR	4.2.3	56	1.2
Medicines should only be prescribed and administered by staff who are authorised to do so, and who are trained and experienced in their use, and in the management of potential related adverse effects of these medicines, including respiratory arrest.	CBR	4.2.3	56	1.2
<p>If medical treatment is necessary to manage intoxication due to VSU, follow your hospital's/health organisation's policy and protocols.</p> <p>If sedation is necessary for the person's safety and there is no applicable policy or protocol, consider one of the following options for managing acute behavioural disturbance due to VSU:</p> <ul style="list-style-type: none"> • midazolam IM* or diazepam oral/rectal/IV (use benzodiazepines with caution due to potential respiratory depression, and only if all of the following apply: the person can be closely observed and vital signs monitored by appropriately trained health professionals, cardiopulmonary resuscitation equipment is available onsite, and staff are trained in cardiopulmonary resuscitation techniques) • olanzapine IM* • haloperidol.* <p>Doses depend on person's body weight, age, other medicines or drugs taken and general health.</p> <p>*not registered in Australia for use in the management of acute behavioural disturbance associated with intoxication due to substance use. Use should be avoided in pre-pubescent children.</p>	CBR	4.2.3	56	1.2
<p>When prescribing medicines, consider the potential risks of:</p> <ul style="list-style-type: none"> • drug-to-drug interactions with other substances (including medicines and alcohol) • cardiac sensitisation • other adverse effects of medicines. 	PP	4.2.3	56	N/A

Recommendation	Type	Section	Page	Clinical question/s
Managing acute intoxication				
Initial monitoring (2–4 hours if no complications, or until recovered)				
If possible, arrange for person to be monitored in a clinical setting throughout the period of acute intoxication, regardless of the person's pattern of use.	CBR	4.2.4	59	1.3
<p>In clinical settings:</p> <p>Encourage the person to stay until significantly recovered and it is safe to leave. Monitor the person until recovered* for:</p> <ul style="list-style-type: none"> • cardiopulmonary function (blood pressure, pulse rate, oxygen levels, ECG) • temperature • neurological observations • changes in mood (e.g. heightened anxiety or agitation) • changes in alertness (Glasgow Coma Scale/AVPU scale), clearness of thinking and behaviour. <p>*Usually approximately 2–4 hours from the time of admission for uncomplicated cases, or continued until the person is clinically stable if recovery is delayed.</p> <p>In other settings:</p> <p>Arrange referral for clinical monitoring, if possible. If clinical referral is not possible, encourage the person to stay until it is safe to leave.</p> <p>Keep watching the person until significantly recovered (e.g. 6 hours) for changes in mood, alertness, clearness of thinking and behaviour.</p> <p>Call an ambulance (if available) or contact local emergency medical services if:</p> <ul style="list-style-type: none"> • the person is becoming more anxious or agitated • the person is losing consciousness or their thinking is becoming less clear (you may have to gently wake the person each time you check) • the person's behaviour is unusual • the person has a seizure • staff do not feel confident to manage the situation. <p>Follow the DRSABCD steps (see recommendations for Emergency care section 4.2.2)</p>	CBR	4.2.4	59,60	1.3
<p>The person can go home in the care of a responsible adult when:</p> <ul style="list-style-type: none"> • alert and aware of their surroundings • speaking normally • walking normally • breathing normally • neurological observations normal (if done) • oxygenation normal (if tested). 	CBR	4.2.4	60	1.3

Recommendation	Type	Section	Page	Clinical question/s
Managing acute intoxication				
Follow-up monitoring (24 hours)				
<p>After initial monitoring, the person can be released into the care of a responsible adult (such as a family member) if fully recovered and you are confident that their condition is stable.</p> <p>Advise the responsible adult to keep monitoring them for 24 hours after release.</p> <p>Before release, arrange referrals to services that can assist with recovery (e.g. psychological therapies outreach services, drug and alcohol services).</p> <p>In clinical settings:</p> <ul style="list-style-type: none"> • Assess whether the person needs further medical treatment. • Arrange referrals as necessary. • Arrange clinical follow-up. <p>In other settings:</p> <ul style="list-style-type: none"> • Arrange referral to medical services for assessment and treatment. 	CBR	4.2.4	60	1.3

Recommendation	Type	Section	Page	Clinical question/s
Managing withdrawal symptoms				
Provide a culturally safe environment during recovery.	PP	5.2	64	N/A
Provide a quiet, safe place to recover, where there is nothing to stimulate the person, and make sure they rest and get plenty of sleep.	CBR	5.2	64	2.1
Make sure the person eats and drinks plenty of fluids.	CBR	5.2	64	2.1
<p>Provide treatment for symptoms, if necessary.</p> <p>In clinical settings:</p> <ul style="list-style-type: none"> • Administer analgesics as required. • Manage anxiety or agitation in line with local treatment protocols. If no local protocol applies, consider administering a short-acting benzodiazepine (e.g. lorazepam or oxazepam). • If benzodiazepines are administered, use an appropriate scale to titrate the dose. <p>In other settings:</p> <ul style="list-style-type: none"> • Give paracetamol if the person has a headache or a high temperature. • If pain is not relieved, arrange medical assessment. 	CBR	5.2	64	2.1
<p>Monitor the person's recovery.</p> <p>In clinical settings:</p> <ul style="list-style-type: none"> • Take frequent regular observations (blood pressure, pulse rate, respiratory rate, temperature, oxygen saturation). • Monitor for signs of head injury or infections (e.g. pneumonia) • Monitor requirement for and effects of medicines. <p>In other settings:</p> <p>Check the person frequently and regularly and monitor any change in symptoms.</p> <p>Arrange medical assessment immediately if:</p> <ul style="list-style-type: none"> • symptoms become worse • the person has trouble breathing • the person has any physical problems • the person is agitated or anxious • the person is not becoming more alert over time • the person is behaving in an unusual way. 	CBR	5.2	65	2.1

Recommendation	Type	Section	Page	Clinical question/s
Comprehensive post-acute assessment				
Assessment considerations				
Comprehensive assessment should be made when the person has recovered from acute intoxication.	CBR	6.2.1	69	3.1–3.7
Explain the purpose of the assessment and obtain the person's consent before conducting any assessments (see section 3.1.2 Informed consent). Consent may include consent to share information with other agencies involved in the person's care.	PP	6.2.1	69	N/A
Assessments should be carried out in the person's first language, where possible. If it is not possible for the assessor to perform the assessment in the person's first language, an interpreter should be present during the assessment.	PP	6.2.1	69	N/A
Initial/post-acute assessment				
The initial or post-acute assessment should include (if possible): <ul style="list-style-type: none"> • a clinical and social history (e.g. illnesses and injuries, medical treatments, accommodation, occupation, relationships) • recreational substance use history (types of inhaled substances used, frequency, quantity, alcohol and other drug use) • brief cognitive assessment (e.g. Mini-Mental State Examination) • screening for mental health conditions using a validated instrument (e.g. Kessler Psychological Distress Scale – K10, Strong Souls) • assessment of risk for violence or self-harm • physical examination • laboratory investigations (full blood screen, urine drug screen), ECG if possible • pregnancy test for females, if indicated • further investigations as indicated. If any of these assessments cannot be made during the initial assessment, they should be completed as soon as possible (in stages, if necessary).	CBR	6.2.2	70	3.8

Recommendation	Type	Section	Page	Clinical question/s
Comprehensive post-acute assessment				
Further assessment including specialist assessment				
<p>Specialist assessment should be arranged as indicated and may include the following:</p> <ul style="list-style-type: none"> • detailed assessment of substance use (specialist in addiction medicine or alcohol and other drug service) • full neurological assessment (e.g. neurologist) • cardiovascular assessment (e.g. cardiologist) • detailed cognitive assessment (e.g. psychiatrist/child and adolescent psychiatrist, clinical psychologist/child psychologist) • detailed mental health assessment (e.g. psychiatrist/ child and adolescent psychiatrist, clinical psychologist/child psychologist) • assessment of daily living skills (e.g. occupational therapist) • other assessments as indicated (e.g. paediatrician, speech pathologist). 	CBR	6.2.3	73	3.8
<p>When caring for a pregnant woman who uses inhaled volatile substances:</p> <ul style="list-style-type: none"> • arrange standard antenatal care (including blood tests, physical examination and other routine investigations) if she has not been in contact with medical services while pregnant • arrange referral to an obstetrician for a high-risk pregnancy assessment. 	CBR	6.2.3	74	3.4, 3.8
<p>If more information is required to clarify aspects of the person's history (e.g. developmental history, occupational history, mental health history, family medical and social history including substance use and mental illness, injuries, education and forensic history), consider contacting other people or services (subject to ethical and legal considerations including privacy legislation):</p> <ul style="list-style-type: none"> • family • hospital admissions • police • department of justice • schools. 	CBR	6.2.3	74	3.8

Recommendation	Type	Section	Page	Clinical question/s
Brief intervention				
All healthcare workers who have contact with people who use volatile substances should provide brief intervention whenever there is an opportunity to do so (if they have the appropriate training and skills).	CBR	7.2	77	4.1–4.6
Brief intervention should include giving the person clear, factual information about the health risks of VSU and the benefits of quitting.	CBR	7.2	77	4.1–4.6

Recommendation	Type	Section	Page	Clinical question/s
Case management				
Case management should be offered to all chronic volatile substance users, if possible.	CBR	8.2	82	5.3
Case management should be offered to all pregnant volatile substance users, if possible.	CBR	8.2	82	5.4
Consent must be given by the person before their information can be shared between care providers and services.	PP	8.2	82	N/A
When multiple providers/services are involved in providing a person's care, they should negotiate to appoint a single coordinating service. The coordinating service should: <ul style="list-style-type: none"> • take responsibility for coordinating referrals and follow-up • nominate one person to be the person's main point of contact • ensure all relevant information is shared between provider services, subject to the person's consent • maintain clear and effective communication between provider services. 	PP	8.2	83	N/A
The coordinating service should encourage the person's family to be involved in the case management process and should consult family members as appropriate.	PP	8.2	83	N/A
An interpreter should be involved if the main designated case manager does not speak the person's first language.	PP	8.2	83	N/A
Care plans should be culturally appropriate.	PP	8.2	83	N/A

Recommendation	Type	Section	Page	Clinical question/s
Education				
Universal drug education programs				
<p>When providing education about VSU to groups that may include young people with different levels of experience with VSU, the information should be appropriate for the local community and culture. Educators should:</p> <ul style="list-style-type: none"> • focus on VSU that is already occurring in the community • emphasise information about reducing harm • avoid giving young people new ideas about substances that can be inhaled to become intoxicated. 	PP	9.2.1	87	N/A
Targeted VSU education				
<p>Education for users of inhaled volatile substances, those at risk, and their families and peers, provide information about:</p> <ul style="list-style-type: none"> • health effects of volatile substances and strategies for reducing harm • basic first aid for an intoxicated person (e.g. assessing danger to the person and others, letting the person rest in a quiet safe place with fresh air; making sure the person can breathe, when to call emergency services) • how to monitor an intoxicated person during and after recovery (e.g. managing symptoms, what to look for; making sure the person eats and drinks, when to call emergency services) • what to do if there is danger (e.g. contact people in community responsible for safety, such as police and other authorised people) • information about services that can help the person recover (e.g. counselling services, residential rehabilitation facilities, youth and activity programs). 	PP	9.2.2	88	N/A
<p>For families of people who use inhaled volatile substances, their peers and other people of influence, provide or arrange education about VSU.</p>	PP	9.2.2	88	N/A
<p>For all chronic users of inhaled volatile substances, provide or arrange education about the short-term and long-term harmful effects of VSU and the positive health and social benefits of reducing VSU and quitting.</p>	CBR	9.2.2	88	6.3

Recommendation	Type	Section	Page	Clinical question/s
Psychological therapies				
<p>Arrange psychological therapy for all volatile substance users (occasional, regular or chronic users), in conjunction with other treatment.</p> <p>Consider one or more of the following:</p> <ul style="list-style-type: none"> • general counselling (person-centred counselling) • family-inclusive practice • cognitive-behavioural therapy • motivational interviewing • narrative therapy (e.g. storytelling or yarning) • group therapy • peer mentoring • therapeutic community. 	CBR	10.2	92	8.1–8.6
<p>Healthcare workers who provide psychological therapies in the management of VSU should:</p> <ul style="list-style-type: none"> • have appropriate skills, experience or formal training • receive appropriate clinical supervision and support • use the person's first language (or, if not possible, arrange for an interpreter to be present). 	PP	10.2	92	N/A
<p>When providing cognitive-behavioural therapy for a person who has an intellectual impairment, the treatment should be tailored to the individual's capacity (e.g. emphasise the behavioural component of therapy).</p>	CBR	10.2	92	8.6

Recommendation	Type	Section	Page	Clinical question/s
Activity and youth development programs				
Role of activity and youth development programs				
<p>For all volatile substance users (occasional, regular or chronic users), consider referral to an appropriate activity program/ youth development program.</p>	EBR (Grade D) ²⁻⁸	11.2.1	104	9.1–9.6
<p>Recommend or arrange participation in activity programs/ youth development programs for all community members at risk of VSU, where possible.</p>	PP	11.2.1	104	N/A
<p>Activity programs/youth development programs should be offered alongside other VSU interventions and should not be used as the main approach to VSU management, especially in communities with a high proportion of chronic users.</p>	PP	11.2.1	104	N/A
<p>Make programs available to peers and those at risk, not just people who use volatile substances.</p>	PP	11.2.1	104	N/A

Recommendation	Type	Section	Page	Clinical question/s
Activity and youth development programs				
Designing activity and youth development programs				
<p>When developing activity programs and youth development programs, consider the following principles:</p> <ul style="list-style-type: none"> • Tailor programs and select appropriate activities to meet specific needs of intended participants such as different age groups, girls, boys, pregnant women, urban communities, rural/remote communities, people with brain damage affecting their thinking. • Offer participants opportunities to learn skills and build capacity for taking control of their lives – not just recreation. • Involve participants' families and community in activities. • Run intensive programs during times when there is more VSU (e.g. during school holidays, on weekends, at night). • Base programs on activities that are practical to run using local resources, so that programs are sustainable long term. • Involve young people and their families in designing and running youth development programs. 	PP	11.2.2	105	N/A

Recommendation	Type	Section	Page	Clinical question/s
Residential rehabilitation				
Mainstream residential rehabilitation				
<p>Residential rehabilitation for VSU is recommended for the following groups, after other interventions have been tried:</p> <ul style="list-style-type: none"> • chronic users • regular users who also use other substances (polydrug users) • users who have comorbid mental health conditions • pregnant users, where further use is anticipated. 	CBR	12.3.1	112	10.1–10.4
<p>Before being admitted to a residential rehabilitation facility, people who use volatile substances should receive a thorough medical and mental health assessment to identify any conditions that will require specific treatment.</p> <p>If it has not been possible to arrange medical and mental health assessment before admission, these should be arranged as a matter of urgency following admission.</p>	CBR	12.3.1	112	10.1–10.4
<p>If possible, the person should be referred to a residential rehabilitation where their first language is spoken by the staff. If this is not possible, access to an interpreter should be arranged as necessary, following admission.</p>	PP	12.3.1	112	N/A

Recommendation	Type	Section	Page	Clinical question/s
Residential rehabilitation				
Outstation rehabilitation				
Outstation rehabilitation is recommended for all volatile substance users (occasional, regular or chronic) where culturally and socially appropriate, if the person's family agrees.	CBR	12.3.2	113	11.1–11.6
Before being admitted to an outstation rehabilitation facility, people who use volatile substances should receive a thorough medical and mental health assessment to identify any conditions that will require specific treatment. If it has not been possible to arrange medical and mental health assessment before admission, these should be arranged as a matter of urgency.	CBR	12.3.2	113	11.1–11.6
If possible, the person should be referred to an outstation rehabilitation facility where their first language is spoken by the staff. If this is not possible, access to an interpreter should be arranged.	PP	12.3.2	113	N/A

Recommendation	Type	Section	Page	Clinical question/s
Managing co-existing health conditions				
Arrange a full physical and mental health assessment by the person's general practitioner or other appropriately trained health worker to determine what treatment is needed.	CBR	13.2	119	12.1
For people with mental health conditions in addition to VSU, arrange or refer for effective treatment from an appropriately trained health professional.	CBR	13.2	119	12.1
(In clinical settings) provide treatment for mental health conditions according to your health service's protocols. If no local protocol applies, follow current national management guidelines for the specific condition or for the management of comorbid substance use and mental illness.	PP	13.2	119	N/A
Before prescribing any medicine, assess the potential adverse effects and drug-to-drug interactions by carefully considering the effects of other medical conditions, mental health conditions, other medicines and other substances the person may be using.	PP	13.2	119	N/A
When prescribing medicines for pregnant women or children, follow prescribing guidelines.	PP	13.2	119	N/A

Recommendation	Type	Section	Page	Clinical question/s
Aftercare				
Provide aftercare for all volatile substance users (occasional, regular or chronic).	CBR	14.2	122	13.1–13.5
Acute and residential services should incorporate aftercare plans in their discharge planning processes.	PP	14.2	122	N/A
When several agencies/services are involved in providing aftercare for a person, there must be a negotiated point of responsibility. It is recommended that: <ul style="list-style-type: none"> • one agency is assigned responsibility for coordinating referrals and follow-up • one person, from the agency assigned responsibility for coordinating referrals, should be nominated as the individual's contact. Services/agencies that provide aftercare should set up systems for clear communication with each other (including sharing of information, if the person has given their consent for their personal information to be shared between providers).	PP	14.2	122	N/A
Aftercare for young people recovering from VSU should include referral to an activity or youth development program (see section 11. Activity and youth development programs).	CBR	14.2	122	13.1–13.5
For pregnant women recovering from VSU, aftercare should involve: <ul style="list-style-type: none"> • strong encouragement to stay in contact with antenatal services for care throughout the pregnancy • referral to appropriate maternity care services, including referral to an obstetrician for high-risk pregnancy assessment and postnatal care. 	CBR	14.2	122	13.3

I. Introduction

I.1 Background

Volatile substance use (VSU) refers to the practice of deliberately inhaling ('sniffing', 'huffing', 'bagging' or 'chroming') substances that are vaporous at ambient temperatures, for the purpose of becoming intoxicated. Substances used for this purpose include various hydrocarbons, ethers, ketones and alkyl halides (Table 1.1)⁹, which are common ingredients in household products (Table 1.2). The volatile substances covered by this guideline can be classified into three categories: solvents, gases and aerosols.

The problem of VSU has impacts on individuals, families and communities. The financial cost of petrol sniffing in Central Australia alone has been estimated at \$78.9 million per year, including costs associated with years of healthy life lost due to VSU (disease burden), costs to the crime and justice system, lost productivity, and costs of health care, long-term care and rehabilitation.¹⁰

Table 1.1 Examples of volatile substances

Acetone
Bromochlorodifluoromethane
Butane
Chloroform
Ethyl acetate
Hydrocarbons (aliphatic, aromatic and halogenated)
Petroleum
Propane
Tetrachloroethylene
Toluene
Trichloroethane
Trichloroethylene
Xylene

Source: reference 11

Table 1.2 Sources of commonly used volatile substances

Category	Examples
Solvents	Correction fluid and thinner Dry-cleaning fluid Modelling glue Nail polish remover Petrol Paint stripper Rubber cement Sealants Superglue
Gases	Fire extinguisher Fuel gas and lighter fluid
Aerosols (containing propellants and/or solvents)	Deodorants Hairspray Vegetable oil sprays Spray paint

Adapted from reference 12

Note

Common terms for volatile substance use include:^{12, 13}

- bagging (inhaling fumes from a plastic bag)
- huffing (stuffing an inhalant soaked rag into the mouth)
- sniffing or snorting (inhaling through the nose)
- chroming (inhaling spray paint fumes from a spray can).

1.1.1 Prevalence and patterns of VSU in Australia

The prevalence of VSU is difficult to determine because this information is not usually captured in national records. Inhaling volatile substances is not an offence in most jurisdictions and therefore not likely to be recorded in crime statistics. National drug survey reports may underestimate true VSU rates. Many school-aged volatile substance users do not attend school regularly and therefore will not be included in school surveys.¹⁴

International research indicates that the prevalence of VSU is highest among young people from socioeconomically deprived and marginalised groups, and that rates are particularly high among some Aboriginal and Torres Strait Islander peoples.¹⁵ Very little information is available about rates of VSU among adults.¹⁶

The 2008 Australian Secondary Students' Alcohol and Drug Survey found that the rate inhalant use within the previous month was highest among 12-year-olds (11%), compared with 4% of 17-year-olds.¹⁷ Approximately 3% of 12-year-olds and 1% of 17-year-olds reported that they used these substances regularly (more than 10 times in the past year).¹⁷ However, these findings may not reflect actual VSU rates in the community because of potential selection bias towards those with high school attendance rates and because the survey excludes students who do not remain in

school. Other data suggest that rates of substance use are relatively higher among adolescents who do not complete secondary school. In addition, the accuracy of self-report cannot be validated and may be influenced by various factors, including the presence of a teacher in the room.

The 2007 National Drug Strategy Household Survey found that around 3.1% of Australians aged 14 years and older (500,000) had ever used volatile substances.¹⁸ However, the findings of this survey may not accurately reflect rates of VSU in some subgroups, because a relatively high proportion of respondents were aged 40–60 years, people under 18 years were not interviewed confidentially, and the sample included only a small number of Aboriginal and Torres Strait Islander people. In the 2008 National Aboriginal and Torres Strait Islander Social Survey,¹⁹ 4.2% of survey respondents aged 15 years and over reported that they had used inhaled volatile substances at some time in their lives.²⁰ The earlier 1994 National Drug Strategy Household Survey Urban Aboriginal and Torres Strait Islander Peoples Supplement found that Aboriginal and Torres Strait Islander people were almost twice as likely to have used volatile substances at any time in their life, compared with other Australians.²¹

The types of volatile substances used in Australia differ between regions. Inhaling from aerosol cans is more common in urban and rural settings, while petrol sniffing is the most common form of VSU in some remote Aboriginal communities.¹⁴ Among remote Aboriginal communities, the estimated proportion of people who sniff petrol varies greatly between regions, with the highest rates identified in the South Central Australian subregion (16%) and the Ngaanyatjarra Lands in Western Australia (14%).²²

Patterns of use (Table 1.3) differ between individuals. Some researchers have suggested that there are four main groups who use volatile substances:¹⁴

- young people from various backgrounds who experiment with inhalants but usually do not persist (typically occasional use)
- socially and economically marginalised young people who use inhalants (typically regular or chronic use)
- young people in some remote Aboriginal communities where petrol sniffing is common (typically regular or chronic use)
- adults who are socially and economically marginalised, including homeless people, who sometimes use inhalants when they cannot obtain alcohol (typically regular opportunistic polydrug use).

VSU in adults may reflect additional patterns of use and risk factors, but use among adults has not been well researched.

Among people participating in the 2007 National Drug Strategy Household Survey who said they had recently inhaled volatile substances, almost half (46%) also used alcohol with inhalants, almost one-third (31%) also used methylenedioxymethamphetamine ('ecstasy') at the same time as inhalants, and over one-quarter (27%) used marijuana/cannabis at the same time.¹⁸ VSU has been associated with later use of heroin and other drugs.¹⁴

Table 1.3. Patterns of VSU

Pattern of use	Definition* and description	Examples†
Occasional	Irregular use occurring on only a few occasions Includes experimental use	School children experimenting by sniffing glue People experimenting because their peers are also using VSU motivated by curiosity or peer pressure
Regular use (opportunistic and polydrug use)	Repeated use of volatile substances on more than just a few occasions Includes use of volatile substances as well as other substances, either on different occasions or at the same time (polydrug use) Choice of VSU may depend on availability (opportunistic use)	VSU as part of regular social group activity VSU motivated by enjoyment or fun
Chronic	Long-term regular use, including daily use	People who carry the substance with them and inhale several times a day

* Terms used in this guideline for different patterns of VSU. There is no internationally accepted classification for VSU, and definitions and descriptors for patterns or use are not consistent across published literature on VSU.

† Examples from reference 12

People's reasons for inhaling volatile substances are not well understood.¹⁴ Reasons suggested by researchers include pleasure (feeling good, excitement), adventure (hallucinations can be both frightening and entertaining), as a social activity, as a response to low self-esteem, to defy authority or upset parents or other people, to relieve boredom, to relieve hunger pains or other physical pain, to relieve emotional pain, as an escape from unbearable life situations, and as a way to express personal identity.^{14,23,24} Table 1.4 shows some of the ways young Australians describe their VSU.

Compared with other substances that can be used socially or for pleasure, volatile substances are very accessible and cheap.

Table 1.4. Young people's attitudes to VSU

<p><i>It makes you float off, forget about your past and everything, be in your own world. If anyone annoys you, you just push them aside and ignore them.</i></p> <p>Non-indigenous woman (19 years), urban area²⁶</p> <p><i>I'm already spending \$200 on smack [heroin]. Why spend more? That's why I use a bit of chrome, just to top it up.</i></p> <p>Non-indigenous man (17 years), urban area²⁵</p> <p><i>Sniffing fuel is like feeling drunk. Feel relaxed with friends. Sometimes by myself. We all go down for ball, play touch footy, chuck stones at birds.</i></p> <p>Indigenous man (14 years), remote community²⁵</p>	<p><i>There are different [reasons for] chroming. Family situations, jealousy, boyfriend girlfriend stuff, people wanting to bash you up. For me family and personal relationships [were the reasons]. Sniffing makes me forget about all that. Erases things from my mind. I think about fun things.</i></p> <p>Indigenous woman (17 years), urban area²⁵</p> <p><i>Paint is better [than other drugs] for seeing and hearing things and the rush. Makes you dance, want to walk fast and talk a lot, sing and listen to music.</i></p> <p>Indigenous woman (16 years), urban area²⁵</p>
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Sources: references 25, 26

1.1.2 Health effects of VSU

The physical effects of VSU on an individual depend on several factors including the chemical composition, mode of administration and air concentration of the substance (which is influenced by whether it is inhaled in fresh air or an enclosed space), and the person's sex, age and level of physical activity at the time of exposure.²⁷ Direct physical effects range from minor (e.g. intoxication, nausea or headaches) to severe (e.g. seizures, neurological deficits, cognitive impairment or sudden death).^{13,15,28-35}

The World Health Organization recognises that chronic VSU can lead to dependence³⁶, a multifactorial health disorder that often involves relapses over time.³⁷ Chronic VSU has also been associated with a withdrawal syndrome^{38,39}, although there is limited evidence clearly distinguishing withdrawal symptoms that are specifically due to inhaled substances from related symptoms and the effects of other substances.^{12,40}

Recovery from the short-term physical effects of VSU is rapid, so the prognosis is generally good for people who use these substances occasionally and do not inhale an excessive amount in one occasion.¹⁶ However, there have been reports of sudden death due to VSU^{33,34,41}, caused by direct toxic effects, smothering (asphyxia due to plastic bag), inhaling vomitus, injuries and other causes.³⁴ Sudden death has been reported in people with no previous history of volatile substance use.¹³

People with significant brain damage and changes in behaviour (neurobehavioural impairment) caused by long-term use are less likely to make a full recovery.²⁸ These people can maximise their chance of recovery by completely stopping their VSU (total abstinence).²⁸

1.1.3 Social effects of VSU

VSU is associated with a range of social problems for users and their communities. For people who use volatile substances, consequences can include:¹⁴

- leaving school early
- being unable to get a job
- damaged relationships with family
- being avoided by peers and becoming isolated from other people
- losing the chance to learn cultural knowledge
- becoming homeless
- losing their place in the social group or community
- getting in trouble with police
- damage to spirit.

VSU can cause significant problems for whole communities due to users' disruptive or antisocial behaviour, and criminal behaviour including petty crime and violent crimes committed while intoxicated.¹⁴ VSU can be extremely distressing for families, and often adds to difficulties the family is already experiencing.¹⁴

1.1.4 How the problem of VSU is being managed

The National Drug Strategy (www.nationaldrugstrategy.gov.au) is based on supply reduction, demand reduction and harm reduction.

Four main approaches are currently used to manage VSU:¹⁴

- efforts to reduce the supply of volatile substances
- efforts to reduce demand through interventions targeting users
- efforts to reduce harm among volatile substance users and their communities
- law enforcement.

Efforts to reduce the supply of volatile substances include substitution of conventional petrol with the low-aromatic fuel (*Opal*) in regional and remote communities including sites in Central Australia and Kakadu.^{10,42} A 2008 study commissioned by the Petrol Sniffing Prevention Team of the Office of Aboriginal and Torres Strait Islander Health in the Commonwealth Department of Health and Ageing (DoHA) reported that the introduction of *Opal* was associated with reductions in the prevalence and frequency of petrol sniffing.⁴³ Although the introduction of *Opal* is not the sole reason for reductions in sniffing, it is likely to have contributed significantly.

Efforts to reduce demand through interventions targeting users include clinical management, counselling and purpose-designed interventions such as residential, outstation, education, and activity/youth development programs.^{14,44}

Efforts to reduce harm among volatile substance users and their communities include education about avoiding VSU in small, enclosed places, avoiding injury while intoxicated, and how to look after a person who is intoxicated (this approach is usually referred to as 'harm reduction').

Law enforcement to manage VSU differs between states and territories (see section 3. Legal considerations). Under the Northern Territory Volatile Substance Abuse Prevention Act, residents and community councils can request that the Minister declares an area a Management Area and approves a Management Plan for the area in order to control the possession, sale and supply, use and storage of volatile substances that can cause individuals and communities harm. Several Top End and Central Australian communities have declared Management Areas and some have Management Plans.⁴⁵

The Australian Government's Petrol Sniffing Strategy (Eight Point Plan)⁴⁶, launched in 2005, is a comprehensive regional approach to address the problem of petrol sniffing in remote regions through consistent legislation, appropriate levels of policing, further rollout of low-aromatic petrol, alternative activities for young people, treatment and respite facilities, communication and education strategies, strengthening and supporting communities, and evaluation. The Strategy is being implemented by four Australian Government agencies: DoHA, the Department of Families, Housing Community Services and Indigenous Affairs (FaHCSIA), the Department of Education, Employment and Workplace Relations (DEEWR) and the Attorney-General's Department (AGD). The Strategy is also supported by the South Australian, Western Australian, Queensland and Northern Territory governments.

1.2 Clinical need for this guideline

Many current VSU treatment and rehabilitation services are modelled on services designed for users of other substances such as alcohol. However, people who use volatile substances have special needs that may not be met by conventional drug and alcohol treatment strategies. Approaches that require a high level of cognitive function, such as cognitive-behavioural therapy (CBT), may not be suitable or require adaptation for chronic users with long-term neurological damage. Issues that are specific to the context (e.g. remote areas versus urban areas), must also be considered when delivering services for people who use volatile substances.¹⁴

This guideline for volatile substance use, including petrol sniffing, has been developed as part of the Australian Government's Petrol Sniffing Strategy (Eight Point Plan).⁴⁶

1.3 Purpose of this guideline

The purpose of this guideline is to provide practical, evidence-based recommendations, consensus-based recommendations and practice points to assist healthcare workers to identify, assess and treat people who use volatile substances.

1.4 Intended users of this guideline

This clinical practice guideline has been developed for the use of healthcare workers including doctors, nurses, Aboriginal health workers, Ngangkari, alcohol and other drug workers and allied health professionals including mental health workers.

The actions recommended in this guideline should be carried out by people with appropriate training and expertise in health care. This guideline is not intended for other groups who work with people who use volatile substances, such as police officers or teachers.

1.5 Scope of this guideline

This guideline is intended for use by healthcare workers in metropolitan, rural and remote communities throughout Australia. It applies to the care of people whose pattern of VSU is occasional, regular or chronic, including but not limited to women who use volatile substances during pregnancy, users with impaired intellectual function or impulse control, and those with comorbid health conditions.

This guideline does not apply to people who are exposed to volatile substances in the workplace, those who use nitrites (e.g. amyl nitrite, cyclohexyl nitrite or nitrous oxide), or ex-volatile substance users with acquired brain injury.

1.6 Methods used to develop this guideline

This guideline has been developed in accordance with the NHMRC's rigorous standards for guideline development. Appendices A–E contain detailed reports on the methods used to develop this guideline.

1.6.1 Multidisciplinary committee

In August 2009 NHMRC established a multidisciplinary committee of representatives from professional groups with expert knowledge and experience of caring for people who use volatile substances. Members of the VSU Guideline Development Committee (the committee) are listed in Appendix A.1 and the committee's terms of reference are stated in Appendix A.5.

The process for appointing committee members is described in Appendix B.1. Declarations of interest are listed in Appendix B.2.

1.6.2 Clinical questions

This guideline was designed to answer a series of practical questions about how to care for people who use inhaled volatile substances. Questions on the cost effectiveness of treatment options was not specifically included because all interventions reviewed are currently available in Australian healthcare settings. The process for formulating these clinical questions is described in Appendix B.3i. The clinical questions are listed in Section 16 of this document and Appendix C.

1.6.3 Search strategy

The methodologist developed a search strategy to identify literature relevant to the clinical management of VSU and to answer the clinical questions. The search included literature published in English during the period 1980 to 2009. Grey literature available on the internet at the time of the search (January 2010) and produced during this time frame was also included. Inclusion and exclusion criteria were developed using the PIPOH tool with input from the committee. The process is detailed in Appendix B.3ii.

1.6.4 Evidence appraisal

When developing this guideline, the committee reviewed existing guidelines and considered available evidence. This process is detailed in Appendix B.

In particular, the committee reviewed the following:

- Central Australian Rural Practitioners Association. *CARPA standard treatment manual*. (Fifth edition). Alice Springs: Central Australian Rural Practitioners Association; 2009.⁴⁷
- Australian Resuscitation Council. *Basic life support flow chart*. Australian Resuscitation Council; 2010.⁴⁸
- Gordon A. *Comorbidity of mental disorders and substance use: a brief guide for the primary care clinician*. National Drug Strategy monograph series no. 71. Adelaide: Drug and Alcohol Services South Australia; 2008.⁴⁹
- Aboriginal Mental Health First Aid Training and Research Program. *Depression: guidelines for providing mental health first aid to an Aboriginal or Torres Strait Islander person*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne and beyondblue, the national depression initiative; 2008.⁵⁰
- Mental Health First Aid Training and Research Program. *Depression: first aid guidelines*. Melbourne: Orygen Youth Health Research Centre, The University of Melbourne; 2008.⁵¹

- Aboriginal Mental Health First Aid Training and Research Program. *Psychosis: guidelines for providing mental health first aid to an Aboriginal or Torres Strait Islander person*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne and beyondblue, the national depression initiative; 2008.⁵²
- Mental Health First Aid Training and Research Program. *Psychosis: first aid guidelines*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne; 2008.⁵³
- Victorian Government Department of Human Services (Drugs Policy and Services Branch and Child Protection and Juvenile Justice Branch). *Management response to inhalant use. Guidelines for the community care and drug and alcohol sector*. Melbourne: Victorian Government Department of Human Services; 2003.¹²

Where a new edition was published during the guideline development period, previous editions were also evaluated.

Evidence sources were graded according to level, quality, relevance and strength (process detailed in Appendix B.3).⁵⁴ Where there was insufficient evidence on which to base evidence-based recommendations (EBRs), expert opinion was taken into consideration and consensus-based recommendations (CBRs) were made, where possible.

There is very little evidence available to guide the formulation of recommendations about the clinical management of VSU. Single-case studies were excluded from the evidence considered when formulating recommendations, because this type of evidence has a high risk of bias. The committee found that most available evidence was level IV and could not be used to draw conclusions and formulate recommendations. Accordingly, the majority of recommendations in this guideline are CBRs, which were based on expert opinion and were developed using the consensus process described below. CBRs reflect what is considered to be best practice by experts in the field.

The committee formulated recommendations and/or practice points for all topic areas for which clinical questions were developed, with the exception of early intervention and clinicocultural interventions.ⁱⁱ

The committee decided not to develop recommendations on early intervention for these reasons:

- No appropriate published or unpublished evidence on early intervention in the management of VSU was identified in the literature search.
- There was general consensus among committee members that the effects of early intervention are unclear to experts in the field.

A set of clinical questions on clinicocultural interventions was included (Appendix C), as the committee initially intended to formulate separate recommendations in this area. However, after reviewing the evidence and considering appropriate clinicocultural interventions for the management of VSU, the committee determined that all recommendations in the guideline should have culturally appropriate underpinnings. In addition, the committee decided that a preamble on cultural considerations should be developed to highlight the importance of understanding a person's culture when caring for people who use volatile substances.

1.6.5 Consensus methods used to develop recommendations

Before formulating recommendations for each set of clinical questions, the committee used the NHMRC evidence statement form to review the body of available evidence with regard to the volume of evidence and its consistency, clinical impact, generalisability and applicability. The evidence was graded according to NHMRC grading criteria.⁵⁵ During the grading process the committee decided

ii The committee used the term 'clinicocultural interventions' to indicate clinical interventions that are developed for specific cultural groups, and which deliberately foreground cultural elements or considerations as integral components of care.

whether a graded or consensus-based recommendation could be formulated for each clinical question. The process is described in more detail in Appendix B3.vi and completed evidence statement forms are provided in Appendix D.

A tailored consensus process was developed (see Appendix B Figure 2) to help the committee formulate CBRs in areas where evidence was lacking, but in which committee members had significant relevant expertise.

Although single-case studies were not formally appraised during the evidence synthesis phase of guideline development, the committee initially reviewed selected single-case studies solely for the purpose of generating discussion during the consensus process. After trialling this approach for the first six clinical questions (acute intoxication, withdrawal, comprehensive post-acute assessment, brief interventions and early intervention, education, and case management), the committee concluded that discussion of single-case studies was not useful and this approach was discontinued for the remaining sections.

Due to the lack of evidence in this area there were limitations in developing recommendations. The recommendations should therefore be applied with caution and further research may change the nature and direction of some of the advice.

1.6.6 Public consultation

Public consultation was conducted from Friday 12 November 2010 to Friday 14 January 2011, during which time the draft guideline was available on the NHMRC website. Notification was posted in *The Australian* national newspaper, and the NHMRC invited a range of stakeholders, committees, working groups and interested people to provide submissions.

Ten formal submissions were received. The committee met on 22 and 23 February 2011 to consider all responses to the public consultation submission and, where necessary, revise the guideline in accordance with the submissions.

Further details on public consultation can be located in Appendix B:3viii.

1.6.7 Finalising the guideline

The final draft of the guideline underwent a methodological review by an external guideline development expert to assess compliance with NHMRC requirements for externally developed guidelines.⁵⁶

Before approving this document, the NHMRC also obtained independent clinical expert (peer) review.

The guideline was further amended in response to recommendations from the methodological and independent clinical expert reviewers.

The final guideline was submitted to the NHMRC for approval on 16–17 June 2011. Approval from the NHMRC was received on 8 August 2011.

1.6.8 Dissemination and implementation of the guideline

Electronic versions of the guideline and summary document will be available on the NHMRC website and the NHMRC Clinical Practice Guidelines Portal (www.clinicalguidelines.gov.au).

A mail-out to key stakeholders announcing the release of the guideline and summary document will be undertaken and will include details of how to access an electronic copy or order a hardcopy

version. The release of the guideline will also be communicated to stakeholders through media releases, NHMRC newsletters and industry websites.

A summary document has been created to support implementation. The NHMRC, with input from the committee, created an implementation plan for the Office for Aboriginal and Torres Strait Islander Health, which details dissemination and awareness strategies as well as strategies to support local adaptation and uptake.

Research shows that guideline implementation strategies should be multifaceted.⁵⁷

Appropriate strategies for implementation of this guideline at a local level may include: ⁵⁷⁻⁵⁹

- development and distribution of educational materials
- undertaking interactive educational workshops with local healthcare workers
- engaging opinion leaders to help promote key messages
- using audit and feedback to measure and monitor current practice.

Implementing strategies at the local level should involve examining the barriers and enablers to implementing best practice and strategies should be tailored accordingly. The information gained on barriers and enablers can be used to tailor implementation strategies to overcome barriers, maximise use of enablers and improve clinical practice.

1.7 Scheduled review of this guideline

The NHMRC expects that all clinical practice guidelines be reviewed and revised no more than five years after initial publication. The evidence base on which the guideline was developed is not likely to change significantly within this five-year period, based on the rate of publication in this field.

1.8 Funding

The development of this guideline was funded by the Australian Government through the Department of Health and Ageing, Office for Aboriginal and Torres Strait Islander Health.

2. Ethical and cultural considerations

2.1 Ethical principles when caring for people who use volatile substances

The care of people who use volatile substances should conform to generally accepted ethical principles for health care. In addition, people who use volatile substances are often particularly vulnerable due to reasons that warrant special consideration:

- Many are children or very young.
- They may be homeless or socially isolated.
- They may be living in a remote community.
- They may belong to a different cultural or language group from health providers.
- They may have brain damage due to volatile substance use (VSU).
- They may be shamed or become outsiders in their community due to their use of volatile substances.

Principles to guide the care of people with VSU

All actions performed when caring for people who are intoxicated or recovering from intoxication due to VSU should be:

- provided in culturally appropriate ways that respect the person's dignity
- in the best interests of the person, taking into account their medical needs, their safety and the safety of others, and the effectiveness and likely outcomes of treatment
- respectful and supportive of the autonomy of the person
- available to all who need them
- provided in a competent manner by trained and resourced healthcare professionals.

2.1.1 Respect and dignity

All patients should be cared for in culturally appropriate ways that are respectful of their dignity. Demonstrate respect by:

- **using appropriate communication.** Provide a quiet and culturally appropriate environment that will make the person feel comfortable and safe. Establish rapport and engage in active listening by using open-ended questions, attending to verbal and nonverbal cues, and clarifying both information disclosed by the person and their understanding of information provided to them. Where appropriate, use an interpreter or a patient advocate who can provide support.⁶⁰ Do not deceive the person or make commitments that cannot be met. Good communication is critical to establishing trust, determining the person's healthcare needs and negotiating a treatment plan.
- **avoiding stereotyping and discrimination.** People who use volatile substances are often exposed to negative social stigma, viewed as dangerous or unpredictable, and subject to disparaging stereotyping.⁶¹ This can affect all aspects of their life, with adverse effects on their wellbeing, and create a barrier to seeking health care. While providing care, avoid making assumptions about people who use volatile substances, and avoid any discrimination (expressed verbally or through actions).

2.1.2 Best interests

The principle of beneficence requires that healthcare practitioners act in the best interests of patients. This basic duty to provide safe and effective treatment can be complicated in a number of ways when caring for people who use volatile substances. When determining the most appropriate course of action, take account of:

- **the person's medical needs.** In emergencies including acute intoxication or complications for VSU, the person may have overriding medical needs that must be met in order to preserve life. In the case of life threatening emergencies, healthcare practitioners should act swiftly to minimise harm to the patient. At other times, the person's medical needs should be fully assessed to inform discussions about treatment options.
- **the effectiveness and likely outcomes of treatment.** There is very little high-grade evidence about the effectiveness of many of the interventions used in the treatment of VSU. This makes it difficult to be confident that any particular treatment will in fact benefit the patient. It is consistent with the duty of beneficence to offer treatment as per the recommendations in this guideline, as they represent the current best available information and consensus-based expert opinion.
- **balancing the person's interests against the need to maintain safety.** In general, healthcare practitioners should act for the patient's good. However, in some circumstances, it may be necessary to prioritise actions that preserve the safety of the person with VSU, or that preserve the safety of others including healthcare workers and community members. Protocols for the care of people who use volatile substances must include mechanisms for ensuring the safety of healthcare workers, who have the right to be protected from danger in the course of work.

Beneficence may slip into paternalism if healthcare workers act for the good of the person, while either ignoring or overriding the person's known wishes. There is a strong duty on healthcare workers to balance acting in the best interests of the person with respecting their autonomy. In general, paternalism is not justified and healthcare workers should avoid treating people who use volatile substances in this manner. This is particularly important in the treatment of young people who are competent to make their own decisions.

2.1.3 Autonomy

All individuals have the right to have their autonomy respected. Respect for autonomy entails obtaining valid consent for treatment and protecting the person's privacy and confidentiality.

2.1.3.1 Obtaining valid consent to treatment

When seeking the patient's consent to treatment, healthcare workers should attempt to ensure that consent is freely given and that the person has not been pressured into a particular choice (for example by rushing them). The information provided should be comprehensive, including likely risks and benefits, and any alternatives, including no treatment. The person must be competent (have decision-making capacity) in order to give valid consent. Decision-making capacity can be assessed by:⁶²

- checking to see whether the person has understood relevant information by asking them to explain key points in their own words
- assessing whether the person understands the situation and its consequences, by asking what they believe is wrong with their health and the possible outcomes from this
- asking the person to communicate their choice by telling you what they have decided
- asking about the reasons the person used in order to make their choice about treatment.

If a person is not competent (lacks decision-making capacity), a guardian or other legal decision-maker may give valid consent for treatment. In emergencies, treatment may be given without consent. In both of these situations, information should be provided to the person, to the extent that they are able to understand it.

Young people, irrespective of their age, are able to give consent if they have decision-making capacity, and their choices should be respected.⁶³

Dependency may impair a person's capacity to act autonomously by affecting their free will and ability to make voluntary choices. This is a difficult issue to resolve. Some authors claim that it may be warranted to treat addicted persons coercively in order to restore their long-term autonomy.⁶⁴

Consent may be given either in writing (e.g. using consent forms) or verbally, according to the local protocols. Whether written or spoken, the process must meet the criteria for obtaining valid consent. Evidence of verbal consent should be documented in the clinical records. (For information on *legal* aspects of informed consent, see section 3.1.2.)

2.1.3.2 Protecting privacy and confidentiality

The right to privacy is the right to control certain kinds of personal information; healthcare workers have a duty to protect privacy by maintaining the confidentiality of all patients. Confidentiality is particularly important for people who use volatile substances as any breaches of confidentiality may expose the person to stigmatisation and/or discrimination. Fear of breaches of confidentiality may deter people who use volatile substances from seeking treatment. Healthcare workers should protect confidentiality by limiting the number of people involved in care (e.g. trainees or students), while assisting patients to understand the team approach to care.⁶⁵

People who use volatile substances should be advised of any mandated exceptions to confidentiality provisions. The confidentiality implications of referrals should be explained in advance of making the referral. This explanation should include providing information about exactly who will have access to the person's medical history.

2.1.4 Equity

Individuals who use volatile substances often come from communities or social groups that are socioeconomically deprived or have poor access to healthcare services. In order to meet the ethical requirements of equity, health care should be provided on the basis of need, and policy makers and healthcare workers should aim for parity in service provision irrespective of location.

Meeting the requirements of equity may be difficult for individual healthcare workers in areas with poor access to services. For some treatment options that are not locally available, e.g. residential programs, it may be necessary to negotiate with patients about their preferences concerning access to a specific service balanced against their willingness or capacity to travel away from home.

Healthcare workers have an ongoing responsibility to advocate on behalf of their patients; this includes advocating for improved access to services for people who use volatile substances where these are currently inadequate.

2.1.5 Professionalism

Health care providers have a professional duty to provide services to the best of their ability. This entails maintaining clinical and cultural competence.

All healthcare workers who work with people who use volatile substances have a responsibility to engage in ongoing education and to be aware of any advances in the management of VSU.⁶⁵

Health services and policy makers have a responsibility to ensure that healthcare workers have the necessary resources and support to provide high quality care in a safe environment.

2.2 Cultural considerations when caring for people who use volatile substances

2.2.1 Cultural considerations in health care

Respecting a person's cultural identity, values and beliefs, and modifying clinical practice and treatment to account for cultural elements or sensitivities that may influence service delivery, are overarching principles of health care. An approach to clinical management that is meaningful and relevant to the person's cultural context will help ensure people receive equal, respectful care. It is all healthcare workers' responsibility to adopt such an approach.

Recognising the importance of culture to the individual, and the influence it has on a person's perceptions of their own health and wellbeing, are important in determining an approach for treatment or management. For example, culture can influence when and why people seek services, their acceptance or rejection of proposed treatment and their adherence to treatment and follow-up. Barriers to health care may include friction or mistrust between people who use volatile substances (particularly young people), and authorities such as police. It is important for health care workers to understand the impact of their behaviour and interaction with clients.

Understanding the person's culture provides necessary context for their medical history, social circumstances and physical environment. An integrated approach to treatment and management can be explored to identify potential links to community and cultural activities that may assist in planning the treatment and management of VSU.

In the context of VSU, prevalence is highest among youth.^{14,17} Significant rates of VSU and presentation for management of VSU among Aboriginal and Torres Strait Islander peoples have been reported.²¹ An approach to treatment and management that considers culture is discussed in reference to two specific groups: young people and Aboriginal and Torres Strait Islander peoples.

2.2.1.1 Young people

Youthⁱⁱⁱ is a developmental stage during which individuals develop their identity, sense of self and their own beliefs. It is a period in which young people explore their independence and is often a time of insecurity and confusion as the young person tries to establish their place in the world. The strong influence of youth subcultures on fashions, behaviours, interests, tastes, and language is a distinctive feature of this period of life. Young people identify with distinct peer groups and subcultures that are highly diverse.⁶⁶ These factors influence a young person's health status, health-care-seeking behaviour and their experiences of healthcare service delivery.⁶⁷⁻⁷⁰

Adolescence is a time in which young people are likely to engage in experimentation and exploration, including risk taking behaviours.^{17,71,72} VSU peaks at around age 12.¹⁷ Young people's reasons for VSU can include curiosity, to challenge authority figures, to obtain a higher social status from engaging in risk taking behaviour, to have fun with friends or to escape from social difficulties and emotional pain.⁷³

iii Generally defined as the period from onset of secondary sexual characteristics to end of the growing period. Adolescence is generally defined as age 13–18 years. [Source: [US] National Library of Medicine Medical Subject Headings, cited by World Health Organization (<http://www.who.int/topics/youth/en/>)]

During this period in a person's life there are also special factors that prevent access to health care for VSU. Barriers include:^{67,69,74}

- fears about what a service provider might tell parents and teachers
- fears around being seen accessing a healthcare service
- feelings of self-consciousness, embarrassment, vulnerability or shame about admitting that they need help
- lack of knowledge about available services
- lack of self-motivation
- the desire to solve one's own problems.

In providing culturally secure practice, healthcare workers need to adapt care to cultural factors relevant to young people, where possible. Attending to young people's concerns will assist in overcoming the barriers they face in accessing health services (e.g. fear of confidentiality breaches) and ensure the cultural values of young people are respectfully and effectively integrated into clinical practice.

Strategies that healthcare workers may consider when caring for young people include the following:

- Be aware of the wide range of diversity across and within cultures – do not make assumptions based on cultural stereotypes.
- Respect that the person's beliefs and values are influenced by their cultural background and youth culture.
- Adopt a respectful and non-judgemental approach to providing care.
- Discuss any concerns the young person may have about confidentiality.

2.2.1.2 Aboriginal and Torres Strait Islander peoples

Diverse Aboriginal and Torres Strait Islander cultures exist throughout Australia. Cultural groups differ according to language, rules for relationships and communities, and ceremonies.⁷⁵ The need for healthcare workers to understand and respect differences in culture, health literacy and healthcare-seeking behaviour in order to tailor the delivery of health care for Aboriginal and Torres Strait Islander people in urban, rural and remote settings is well documented.

The following should be considered in the management of VSU among Aboriginal and Torres Strait Islander peoples:

- gender roles
- family values and structure, kinship and child-rearing practices
- traditional knowledge
- cultural heritage
- values and beliefs about physical, spiritual and emotional aspects of life
- cultural identification
- the roles of community elders
- community involvement
- healthcare-seeking behaviour and perceptions of health care
- structure of health service and other community services
- language
- connection to land, country and community.

Healthcare workers engaging with Aboriginal and Torres Strait Islander clients should recognise the person's cultural values and elements, be conscious of their own behaviour, and try to identify and overcome barriers associated with communication and delivery of health services (Table 2.1). Failure to consider culture when formulating an approach or care plan has the potential to create barriers for Aboriginal and Torres Strait Islander people (e.g. language barriers, role of medicines and traditional healers in health care).

Throughout Australia there are approximately 50 substance use services specifically for Aboriginal and Torres Strait Islander people. These services generally offer some form of counselling or other support, and may be residential or community based.²²

Table 2.1. Tips for non-Indigenous health workers working with Aboriginal and Torres Strait Islander clients

<p>Initiating contact and establishing trust</p> <ul style="list-style-type: none"> • Explain, in an informal manner, your role, where you are based, and your connection to people they may know (e.g. person's relatives or other community members). • Ask about themselves (e.g. <i>Where are you from? Which languages do you speak?</i>) • Ask the person to choose if they would like a family member to be present. • Keep the person's information confidential. • Show that you are trying to understand and learn. • Show interest in the person's country and language. • If possible, talk to the person in a place where they are comfortable (whilst maintaining privacy and confidentiality).
<p>Language and communication style</p> <ul style="list-style-type: none"> • Try to use a communication style suitable for the person's community. • Interviews undertaken in Aboriginal language (even when the patient has a good grasp of English) may provide more accurate information. • Find a language that the client and their family are comfortable with. • Use interpreters and Aboriginal health workers to assist where possible. • Use a non-intimidating questioning style and body language: avoid too much eye contact. Don't sit directly opposite the person – sit side by side. • Use an open and unhurried manner, and take several sessions if necessary. • Avoid direct questioning – systematic direct questioning might be considered rude. • If the person seems uncomfortable answering a question, don't keep repeating it or pushing them to answer "yes or no" to a statement – in this situation the person may agree with the health worker just to avoid confrontation. • Consensus and negotiation may be more effective than direct questions and advice. • When presenting choices, take time to present the possible consequences of each choice instead of simply listing the alternatives and expecting the person to make a choice immediately. • Use simple language. • Avoid giving the impression you are talking down to someone by using jargon or formality. • Use pictures when possible.

...continued

Table 2.1 (continued)

<p>Taking a history</p> <ul style="list-style-type: none"> • Begin with asking questions aimed at understanding the context first (e.g. social history, family relationships and, skin names, if applicable and the health worker is familiar with system). • Give the person time to consider answers to questions. • Don't put too much pressure on the person to reveal information immediately. • Explain why you are asking the question (e.g. <i>I already know that... To understand more and help you I also need to know this...</i>) • Introduce sensitive topics by stating '<i>I am not trying to shame you but it will help me to understand if you can tell me...</i>' • Storytelling may be a way to make the person more comfortable; talking about a hypothetical scenario similar to the person's own can overcome shame and allow them to talk more freely. • Understand that it may not be possible to take a full history until the person trusts the health worker. • Try to understand the cultural significance of events. Don't be afraid to ask if an event has any cultural significance. The family may appreciate the interviewer's attempts to understand. • If the information is incomplete, try to get information from local staff and family while maintaining person's confidentiality (e.g. by asking permission to speak to others).
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Adapted from reference 76

2.2.2 A culturally appropriate approach to health care

A culturally appropriate approach to health care involves consideration of cultural competence, cultural respect, concepts of health and healing, concepts of reclaiming country or return to country, the role of community in healing, and appropriate systems of governance (Table 2.2).

Table 2.2. Key characteristics of a culturally appropriate approach to treatment and management

Element	Description
Cultural competence	<p><i>Cultural competence is a set of congruent behaviours, attitudes and policies that come together in a system, agency or among professionals and enable that system, agency or those professionals to work effectively in cross cultural situations.</i></p> <p>Cross et al (1989)⁷⁷, cited in National Center for Cultural Competence (2006)⁷⁸</p> <p><i>Cultural competence is much more than awareness of cultural differences, as it focuses on the capacity of the health system to improve health and wellbeing by integrating culture into the delivery of health services.</i></p> <p style="text-align: right;">NHMRC (2006)⁷⁹</p>

...continued

Table 2.2 (continued)

Element	Description
Cultural security	<p><i>Cultural security is a commitment to the principle that the construct and provision of services offered by the health system will not compromise the legitimate cultural rights, views, values and expectations of Aboriginal people. It is a recognition, appreciation and response to the impact of cultural diversity on the utilisation and provision of effective clinical care, public health and health systems administration.</i></p> <p><i>Cultural security is about ensuring that the delivery of health services is of such a quality that no one person is afforded a less favourable outcome simply because they hold a different cultural outlook.</i></p> <p style="text-align: right;">WA Department of Health (2001)⁷⁵</p>
Cultural respect	<p>Cultural respect is the “[r]ecognition, protection and continued advancement of the inherent rights, cultures and traditions of Aboriginal and Torres Strait Islander Peoples.”</p> <p style="text-align: right;">Dell (2005)⁸⁰</p> <p>Cultural respect is achieved when:⁸⁰</p> <ul style="list-style-type: none"> • the health system is a safe environment for people from different cultures • cultural differences are respected and shared respect exists • service delivery does not compromise the cultural rights, practices, and values of people from different cultural groups.
Concepts of health and healing	<p>People’s concepts of health and healing are intertwined with their culture, so understanding these concepts is important when considering service delivery. For example, Aboriginal and Torres Strait Islander health is holistic and encompasses not only physical health but also psychological health, spiritual health, social health and cultural health of not only the individual but the whole community.</p>
Reclaiming/return to country	<p>Understanding and acknowledging the importance of returning to country on health and wellbeing for Aboriginal and Torres Strait Islander people</p> <p>Enabling and supporting people to return to their communities to reconnect with family, community, land, language and identity</p>
Community mobilisation	<p>Recognition of the importance and positive impact community mobilisation can have in the treatment of volatile substance use</p>
Governance	<p>Service delivery models must ensure that respectful consultation is undertaken using community protocols and principles with different cultural groups within communities (particularly with local Aboriginal and Torres Strait Islander communities), to ensure effective cross-cultural representation and input into governance structures.⁸⁰</p>

Table 2.1 shows aspects of a culturally appropriate approach. While some definitions make special reference to Aboriginal and Torres Strait Islander peoples, the principles apply in other cross-cultural situations.

2.2.2.1 Cultural competency

Cultural competency is the set of behaviours, attitudes and policies that enable healthcare workers and health services to work effectively across cultures.⁷⁹ It is the responsibility of all health providers and consumers to achieve the best, most appropriate care and services.⁷⁹

The NHMRC *Cultural competency in health: a guide for policy, partnerships and participation* (2006)⁷⁹ describes principles for developing, assessing and practising cultural competency at four levels:

- system
- organisational
- professional
- individual.

It can be helpful for health workers to check their own cultural competence by asking themselves a series of questions (Table 2.3).

Table 2.3. Questions for self-testing cultural competence

The ASKED cultural competence audit	
Source: Campinha-Bacote (2002) cited in reference 81	
Component	Description
Awareness	Am I aware of culturally appropriate and inappropriate actions and attitudes? Does my behaviour or attitudes reflect a prejudice, bias or stereotypical mindset?
Skill	Do I have the skill to develop and assess my level of cultural competence? What practical experience do I have?
Knowledge	Do I have knowledge of cultural practices, protocols, beliefs, etc? Have I undertaken any cultural development programs?
Encounters	Do I interact with Aboriginal and Torres Strait Islander people? Do I interact with culturally and linguistically diverse people? Have I worked alongside Aboriginal and Torres Strait Islander people? Have I worked alongside culturally and linguistically diverse people? Have I consulted with Aboriginal and Torres Strait Islander persons or culturally and linguistically diverse groups?
Desire	Do I really want to become culturally competent? What is my motivation?
Other questions <ul style="list-style-type: none"> • What do we know about different groups of people? • Whose standards have we accepted as the key standard for comparison? • Whose ways of living are privileged? • What are the implications of imposing understandings on people? 	

Adapted from reference 81

2.2.2.2 *Cultural security*

To develop a culturally appropriate approach to clinical treatment and management, the concept of cultural security must be used as a framework for developing culturally secure practice and services.

Cultural security for Aboriginal and Torres Strait Islander peoples has been defined as “a commitment that the construct and provision of services offered by the health system will not compromise the legitimate cultural rights, views, values and expectations of Aboriginal people” and “a recognition, appreciation and response to the impact of cultural diversity on the utilisation and provision of effective clinical care, public health and health systems administration.”⁸² Culturally secure services respectfully and effectively integrate the cultural values of Aboriginal and Torres Strait Islander people with best clinical practice and service delivery by:⁸³

- identifying elements of Aboriginal culture that influence the delivery of health and community services
- modifying service delivery frameworks to take into account these cultural elements
- reviewing service delivery practices to guarantee they do not offend Aboriginal people’s culture and values
- regularly monitoring service delivery so that culturally safe standards are met.

3. Legal considerations

3.1 Legislation governing health care in general

The care of people who use volatile substances is conducted within the context of laws that govern the provision of health care in general. These laws establish the basic conditions of health care in Australia, including the requirements for competence to make healthcare decisions, the education standards, registration and the conduct of health professionals, and the legal authority to prescribe medication. The laws governing health care are substantially uniform throughout Australia.

3.1.1 Prescribing of medicines

All prescription medicines must be ordered only by health professionals who are authorised to prescribe independently (medical doctors and eligible nurse practitioners) or authorised to initiate medicines by protocol (e.g. under Emergency Rural Access, Standing Orders or Nurse-Initiated Medicines [NSW] protocols).

3.1.2 Informed consent

Before diagnostic procedures, assessment and treatment can commence, the person's informed consent must be obtained by healthcare workers and must be freely given. (For more information on *ethical* considerations when obtaining informed consent, see section 2.1.3.1.)

It is up to healthcare workers to ensure that the patient fully understands what the procedure or assessment involves (e.g. benefits and risks of the treatment/procedure, potential harms if the treatment is not performed) before any treatment commences. Healthcare workers should spend time with the patient and talk to them about the situation in simple clear language, and attempt to make them feel comfortable about asking questions.⁸⁴

An individual can only give informed consent once they demonstrate that they fully understand the nature and consequences of the treatment/diagnostic procedure/assessment that is available to them.⁸⁵ The patient must show that they understand what the treatment/diagnostic procedure/assessment involves before consent can be obtained and treatment can commence.

Healthcare workers must make it clear to the patient that they have the right to refuse treatment/diagnostic procedure/assessment or stop treatment/diagnostic procedure/assessment at any time.

In some situations the individual may not be able to provide consent. These situations include the scenarios outlined below. Note that the legal requirements that apply where a person cannot give consent differ between jurisdictions and the following is a general guide only:

- **The situation is an emergency.** In an emergency, where treatment must be given immediately, healthcare professionals can generally carry out procedures/assessments if necessary to preserve life and the patient is not in the position to make their own decision (e.g. patient is unconscious).
- **The patient is a child.** A child is usually defined as a person under the age of 18 years, but this varies between jurisdictions. Local state or territory law should be consulted. When the patient is a child, either a parent or guardian can generally consent on the individual/person's behalf (although there is some treatment to which a parent or guardian is unable to consent). However, older children may be able to give consent if they demonstrate they understand the nature of the treatment/diagnostic procedure/assessment and are capable of forming their own preferences in relation to the proposal.

- **The person is intellectually impaired or has an acquired brain injury.** A patient may be incapable of understanding enough to give informed consent if they have significant cognitive impairment.⁸⁵ In such situations, a guardian can generally consent on the individual/person's behalf (although there are some types of treatment to which a guardian cannot consent). The practicalities of this will be guided by the relevant state or territory legislation (e.g. Victoria's *Guardianship and Administration Act 1986*).
- **Treatment is legally mandatory.** In some jurisdictions, either by court order or other invocation of legislative authority, it may be mandatory for individuals to undergo treatment for their conditions. This is in extreme cases, generally when an individual is a harm to themselves and those around them, and will not voluntarily provide consent to treatment.

3.2 State and territory legislation relevant to VSU

In addition to laws that govern the provision of health care in general, various legislation applies to people who are intoxicated due to volatile substance use (VSU), their immediate care, and their subsequent treatment. These laws determine the scope of decisions permissible under the law of the local jurisdiction and include laws that govern interactions with law enforcement (such as options for detention of a person who is at risk of harming themselves or others) and laws that govern certain aspects of VSU treatment (such as mandatory treatment for people who lack capacity to make decisions about their own health care).

These laws vary significantly between states and territories (Table 3.1). Some jurisdictions, such as the Northern Territory, have enacted specific laws directed at dealing with VSU. However, in other jurisdictions, such as Tasmania, there is little specific regulation of VSU and VSU is only regulated if it is covered by more general laws, such as those dealing with intoxication or mental health.

The lack of harmonisation between different Australian jurisdictions can make it challenging for healthcare workers who provide treatment for people who frequently move between Western Australian, South Australia and the Northern Territory.

Table 3.1. Legislation relevant to VSU in Australian states and territories

This table is a general summary only, and is not intended to be relied on as a complete description of the legislation, or of all legislation that may relate to the use of volatile substances.

Australian Capital Territory (ACT)
There is no legislation in ACT that relates specifically to VSU. The legislation listed below pertains to people who are intoxicated
Law enforcement
<i>Intoxicated People (Care and Protection) Act 1994 (ACT)</i>
This Act provides for the care and protection of intoxicated people, including people under the influence of substances such as glue, petrol or other solvents.
A police officer may detain an intoxicated person, under particular circumstances, including if they are behaving in a disorderly way, behaving in a way likely to cause injury to themselves or another person, or is incapable of protecting themselves from physical harm. A police officer may only detain such a person if there is no reasonable alternative for the person's care and protection. The person may only be detained for a maximum of eight hours. A police officer may release a person, including into a care facility licensed under the Act.
If the intoxicated person is leaving a care facility and the carer believes that the person is a danger to themselves or another person, the carer must contact the police. If the carer believes the intoxicated person requires medical care, they must arrange for the intoxicated person to go to an emergency department of a hospital.

Table 3.1 (continued)

New South Wales (NSW)
There is no legislation in NSW that relates specifically to VSU. The legislation listed below pertains to people who are intoxicated.
Law enforcement
<i>Law Enforcement (Powers and Responsibilities) Act 2002 (NSW)</i> Under this Act, a police officer may detain an intoxicated person in certain circumstances. An intoxicated person should generally be taken to and released into the care of a responsible person (usually a friend, family member or member of a organisation providing welfare or alcohol or other drug rehabilitation services). In the event that a police officer cannot release an intoxicated person into the care of a responsible person, or under certain other circumstances, the police officer may detain an intoxicated person at a police station or detention centre.
Treatment
<i>Drug and Alcohol Treatment Act 2007 (NSW)</i> This Act provides for the detention for up to 28 days and mandatory treatment of people with severe substance dependence. Treatment can generally only occur if a person has been assessed by an accredited medical practitioner and if the practitioner is satisfied of a number of things, including that the person has severe substance dependence (including dependence on volatile substances) and requires beneficial care or treatment to protect that person from serious harm. Substance is defined, for the purpose of severe substance dependence, to include volatile solvents.
<i>Inebriates Act 1912 (NSW)</i> This Act applies to 'inebriates', including a person who habitually uses intoxicating or narcotic drugs to excess. Among other things, the Act provides for a person including the inebriate, a relative of an inebriate or a police officer, to apply to a judge or magistrate for an order that an inebriate be placed into care for up to one year.
Northern Territory (NT)
Law enforcement and treatment
<i>Volatile Substance Abuse Prevention Act 2005 (NT)</i> This Act has four main components: <i>1. Prevention and intervention</i> This Act generally provides for a police officer to search for and seize volatile substances (including, for example plastic solvents, cleaning agents, glue, nail polish or petrol) from a person who the police officer believes on reasonable grounds is in possession of a volatile substance and is inhaling, or will inhale, the substance. This Act also provides for a police officer to apprehend a person who the officer believes on reasonable grounds has been inhaling volatile substances and should be apprehended for the protection of himself, herself or another person. The police officer must take an apprehended person to a responsible adult (usually a family member) or to a place of safety. A place of safety is a location that has been officially specified as such under the Act (e.g. an outstation or youth emergency accommodation service). After making all reasonable efforts to take an apprehended person to a responsible person or place of safety, the police officer must reassess the risk of harm. If the apprehended person continues to pose a risk of harm, the police officer may take the person into protective custody until the person no longer poses a risk.
<i>...continued</i>

Table 3.1 (continued)

Northern Territory (NT) (continued)
<p>2. Assessment and treatment</p> <p>Assessors, under the Volatile Substance Abuse Prevention Act, are appointed by the Chief Health Officer (CHO) to undertake assessments of a person and submit a report to the CHO. Certain people may apply to have an accredited assessor examine a person who is believed to be at risk of severe harm resulting from the abuse of a volatile substance. The assessor must examine the person and make a report to the CHO. If the CHO is satisfied that a number of conditions are met, including that the person 'has been assessed as being at risk of severe harm', he or she may apply to a court for the person to undergo mandatory treatment (e.g. at an outstation or residential rehabilitation facility) for a period of up to 16 weeks.</p> <p>3. Community management of volatile substances</p> <p>Residents of an area or a community council may submit a management plan about possession, supply and use of volatile substances to the Minister for approval. In the event that an area management plan is approved by the Minister it is an offence to contravene that plan.</p> <p>4. Unlawful supply of volatile substances and informer's confidentiality</p> <p>It is an offence to supply another person with a volatile substance if the supplier knows the second person intends to inhale the volatile substance or to supply the substance to a third person for inhalation.</p>
Queensland (QLD)
Law enforcement
<p>Police Powers and Responsibilities Act 2000 (QLD) (Sections 603– 607)</p> <p>A police officer may search a person in circumstances including if the police officer suspects the person may be in possession of a potentially harmful thing (including glue, paint or a solvent) and that the person has ingested or inhaled the thing, or is likely to ingest or inhale the thing. A police officer is able to seize the potentially harmful thing if, after being asked, the person cannot give a reasonable explanation why they are in possession of the thing.</p> <p>In certain circumstances, a police officer may detain a person affected by a potentially harmful thing, for the purpose of taking the person to a place of safety, other than a police station (e.g. a hospital or a person's home).</p> <p>If the person cannot be taken to a place of safety (e.g. is behaving violently or relatives are unable to provide care), as a last resort then police are able to detain the person.</p>
<p>Summary Offences Act 2005 (QLD) (Section 23)</p> <p>This Act prohibits the sale of a potentially harmful thing (including glue, paint or a solvent) to a person who intends to intentionally inhale or ingest the thing or supply the thing to another person to inhale or ingest.</p>
Treatment
<p>There is no formal legislation governing VSU treatment in QLD. However, the QLD Department of Communities provides people with places of safety to recover from the effects of volatile substance intoxication. At these places, people are also referred to support /medical services.</p>

Table 3.1 (continued)

South Australia (SA)
Law enforcement
<p>Controlled Substances Act 1984 (SA) (Section 19)</p> <p>This Act establishes a list of 'volatile solvents' under the <i>Controlled Substances (Volatile Solvents) Regulations 1996</i>. This Act prohibits the sale of a volatile solvent to a person who intends to intentionally inhale the solvent, or sell or supply the solvent to another person to inhale.</p> <p>The Act also allows for the Minister to set an age limit for a person to buy volatile solvents. Under the <i>Controlled Substances (Volatile Solvents) Regulations 1996</i> a person must be over the age of 16 years to purchase petroleum products.</p> <p>This Act also provides for authorised officers to confiscate and destroy any volatile solvents found on a person if the officer suspects the person has the solvent for the purpose of inhalation.</p>
Land rights legislation
<p>South Australian Aboriginal land rights legislation, including the <i>Aboriginal Lands Trust Act 1966 (SA)</i>, the <i>Maralinga Tjarutja Land Rights Act 1984 (SA)</i> and the <i>Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981 (SA)</i> allows regulations and by-laws to be made by Aboriginal communities, including to regulate the inhalation, consumption or possession of petrol, or other declared substances.</p>
Public Intoxication Act 1984 (SA)
<p>Under this Act, a police officer may apprehend a person who is in a public place, under the influence of a drug (including petrol) and is unable to take proper care of himself or herself. A police officer may take the person to certain places, including their place of residence, to an approved facility, to a police station (to be detained for not more than 10 hours) or to a sobering-up centre for admission as a patient (to be detained for not more than 18 hours).</p>
Tasmania (TAS)
<p>There is no legislation in Tasmania that relates specifically to VSU. The legislation listed below pertains to people who are intoxicated.</p>
Law enforcement
<p>Police Offences Act 1935 (TAS) (Section 4A. Custody of intoxicated persons)</p> <p>Police may take into custody an intoxicated person who is in a public place, and is behaving in a manner likely to cause injury or damage, or is incapable of protecting him or herself from physical harm. The police officer must make reasonable inquiries to find a place of safety or a responsible person to take care of the intoxicated person. If the officer has been unable to find a place of safety or a suitable care arrangement, the person may be held in custody for a maximum of 12 hours.</p>
Victoria (VIC)
Law enforcement
<p>Drugs, Poisons and Controlled Substances Act 1981 (VIC) and Drugs Poisons and Controlled Substances (Volatile Substances) Regulations 2006 (VIC)</p> <p>Under this Act, a police officer may:</p> <ul style="list-style-type: none"> provided certain conditions are met, search a person under the age of 18 who the police officer reasonably suspects has a volatile substance (or item used to inhale such a substance) and has inhaled, or is likely to inhale, that volatile substance provided certain conditions are met, search any person the police officer reasonably suspects has a volatile substance (or item used to inhale such a substance), and intends to provide these to a person under 18 years
<i>...continued</i>

Table 3.1 (continued)

Victoria (VIC) (continued)
<p><i>Drugs, Poisons and Controlled Substances Act 1981 (VIC) and Drugs Poisons and Controlled Substances (Volatile Substance) Regulations 2006 (VIC) (continued)</i></p> <ul style="list-style-type: none"> • seize volatile substances or items used to inhale such substances in certain circumstance • apprehend and detain a person under the age of 18 years where the police officer believes the person is inhaling, or has recently inhaled, a volatile substance and is likely to cause serious bodily harm to themselves or some other person. The police officer must release the detained person where for example, it becomes known that the person is not under the age of 18 years, or if a suitable person consents to taking care of the detained person. A suitable person may include a parent, guardian, adult family member or employee of a health or welfare agency. <p>This Act creates an offence to sell a deleterious substance if it is known, or should reasonably be known, that the volatile substance will be used for certain activities, including inhalation.</p>
<p>Treatment</p>
<p><i>Severe Substance Dependence Treatment Act 2010 (VIC)</i></p> <p>Under this Act, any person over the age of 18 can apply to a court to detain a person who is also over the age of 18 years and has severe substance dependence. A person may also apply to a court to have someone medically examined for the purpose of the court making an order. A court may only make an order to detain and treat that person if certain conditions are satisfied, including that the person meets all of the criteria for detention and treatment, which include that the person has a severe substance dependence and requires immediate treatment to save the person's life or prevent serious damage to the person's health. A court may order detention and treatment of a person at a treatment facility for 14 days.</p>
Western Australia (WA)
<p>Law enforcement</p>
<p><i>Criminal Code Act 1913 (WA) (Section 206)</i></p> <p>It is an offence to sell or supply intoxicants, including volatile or other substances capable of intoxicating a person, in circumstances where the supplier suspects or knows that the intoxicant will be used for the purpose of intoxication.</p>
<p><i>Protective Custody Act 2000 (WA) (Sections 5–9)</i></p> <p>An 'authorised officer' (which includes a police officer) may take an intoxicated person who is in a public place or trespassing, into protective custody under certain circumstances, including to protect the health and safety of the person and to prevent the person from causing serious damage to property. The intoxicated person may not be held for longer than necessary.</p> <p>An authorised officer has the power to search, seize and destroy an intoxicant (include a volatile or other substance capable of intoxicating a person) from a child (who is in a public place, where the child is consuming or inhaling the intoxicant or where the officer reasonably suspects that the child is about to consume or inhale the intoxicant).</p>
<p>Treatment</p>
<p><i>Aboriginal Communities Act 1979 (WA)</i></p> <p>This Act provides for Aboriginal communities to make by-laws relating to the prohibition, restriction or regulation of the possession, use or supply of deleterious substances. By-laws made under this Act have defined deleterious substance to mean glue or any volatile liquid containing hydrocarbons.</p>

4. Managing acute intoxication

4.1 Acute intoxication

When inhaled, volatile substances are rapidly absorbed into the blood through the lungs and act directly as depressants on the central nervous system through multiple mechanisms.^{13,86} Acute intoxication has a rapid onset, beginning from approximately one to five minutes after beginning to inhale, or after approximately 15 to 20 inhalations. Inhaled volatile substances are rapidly metabolized in the liver, mainly via the cytochrome P450 system.

After a person becomes intoxicated, the acute effects last for several minutes if the person stops inhaling. If the person continues inhaling the volatile substance, the period of acute intoxication can be extended.^{13,32} In some cases, symptoms can persist for hours after ceasing to inhale. Because the elimination half-lives of inhaled substances vary widely⁸⁷, the time that the chemical remains in the body cannot easily be predicted. Other drugs (recreational substances or medicines) can interact with inhaled substances and influence the time to recovery.

The early stages of acute intoxication include a sense of euphoria or a 'rush', light-headedness, uncontrolled behaviour (disinhibition), excitability and impulsive behaviour. If the person continues inhaling, they typically experience blurred or double vision, become dizzy and disoriented, then develop drowsiness and headache (Table 4.1). Other symptoms of acute intoxication can include nausea, vomiting, diarrhoea, abdominal cramps, and coughing. Higher dosages from prolonged use can result in visual hallucinations, loss of consciousness or death.^{13,32,40,88} Cardiac effects include abnormal electrical excitability of the heart, which can cause fatal dysrhythmias.¹³

A person who is acutely intoxicated may present either with no complications or one or more of the following:³⁶

- bodily injuries
- brain injury
- inhalation of vomitus and/or solvent
- delirium
- perceptual distortions, which can include delirium or hallucinations (auditory, visual or tactile)
- convulsions
- coma
- other medical complications.

Notes

A careful clinical examination is essential when anyone shows signs of acute intoxication due to volatile substance use (VSU). The person must be observed until they have fully recovered because:

- it may not be possible to distinguish between the signs and symptoms of acute intoxication due to VSU and those of other causes of delirium including head injury, infection (e.g. meningitis, rheumatic fever), metabolic abnormalities (e.g. hypoglycaemia, diabetic ketoacidosis), poisoning due to other chemicals/ drugs/snakebite, or other medical conditions.
- a person with one of these conditions may also use inhaled volatile substances.

The person should be watched until staff can be confident that the person's signs are not due to any other condition that requires hospital treatment.

If possible, determine which volatile substance/s have been inhaled (e.g. from the person's friends or family). However, the person or their associates may be unwilling to disclose this information.

The National Poisons Information Centre hotline (131 126) may be able to assist with treatment advice.

Table 4.1. Signs and symptoms of acute intoxication due to VSU

Signs and symptoms of acute intoxication from VSU may include the following^{13,40}
Unsteady gait
Difficulty standing
Muscle weakness
Slurred speech
Sneezing
Breathlessness
Wheezing
Involuntary rhythmic movement of the eyes (nystagmus)
Runny nose
Nosebleed
Excess salivation
Red in corners of eyes (injection of conjunctivae)
Apathy and lethargy
Argumentativeness
Hallucinations
Abusive or aggressive behaviour
Unstable mood
Impaired attention and memory
Slowed thinking and body movements (psychomotor retardation)
Decreased level of consciousness (stupor or coma).

4.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on the management of acute intoxication. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

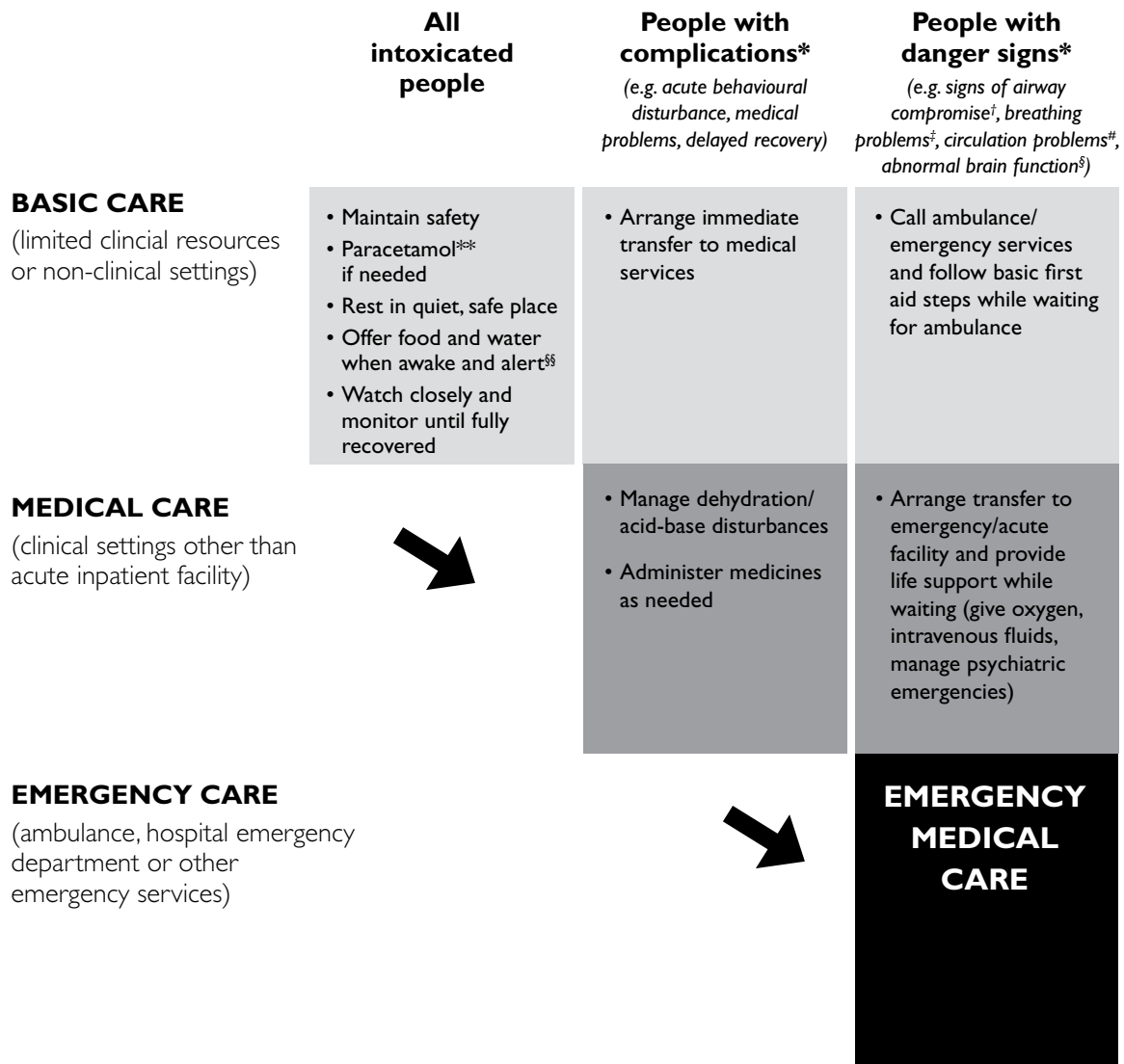
Most people who are intoxicated after VSU need only basic care to make sure they are safe until they recover enough to be sent home or transferred to a safe place where they can be watched and cared for by a family member or other responsible person until they completely recover. The person should be transferred to a medical service immediately if there are any complications, or to emergency services if there are danger signs (Figure 4.1).

Note

Organisations that have regular contact with volatile substance users should ensure that there is always at least one staff member with up-to-date basic first aid training on duty.

Refer to the Australian Resuscitation Council for current recommendations.

Figure 4.1. Level of care required for a person who is intoxicated due to VSU



* or if staff not confident to manage situation
 † gurgling airway noises or evidence of blockage
 ‡ noisy, laboured, or shallow breathing
 # cold skin, sweaty skin, pallor; blue lips
 § poor concentration, becoming more agitated, losing consciousness, unresponsive to pain, seizures
 *** Use paracetamol with caution; some volatile substances are toxic to the liver. Consider other cautions that apply to the individual refer to TGA-approved product information).
 §§ Offer sips of water first. If person can swallow safely, offer water and food.

4.2.1 Maintaining safety

Recommendation	Type
Treat the person with respect. Ensure that all your actions and those of staff help maintain the person's dignity as much as possible.	PP
Consider safety issues for the person being cared for, other staff and yourself. <ul style="list-style-type: none"> • If you can smell fumes (e.g. from the person or their clothing), let fresh air into the room and make sure the room is kept ventilated. • If you feel threatened, call the police or other appropriate help. 	CBR
(For non-clinical settings) Using local service protocols, arrange transfer to medical services if the person shows acute behavioural disturbance, has medical problems, is not recovering normally, or if staff feel that the person needs medical care.	CBR
If medication is needed to keep the person safe as part of their care (see section 4.2.3. Medication), follow your local health service's protocols for the use of medicines.	PP

When caring for a person who is acutely intoxicated due to VSU, the first step is to ensure the safety of everyone involved in the situation, including the intoxicated person, the staff involved and the community.

All staff involved should treat the person with respect, and try to maintain the person's dignity as much as possible while keeping them and others safe. This principle is central to *every* aspect of caring for a person who uses volatile substances, but it is particularly important to remember this when dealing with a crisis.

Remove the volatile substance, if possible.

If the smell of fumes can be detected on the person's breath or clothing, windows or doors should be opened for fresh air and the person should be kept away from fire hazards (e.g. cigarette lighters or open flames).

The following apply if someone is behaving violently or becoming aggressive:^{47,89}

- Try to calm the person down. Talk to them in a quiet place. Speak calmly and clearly.
- Show support (e.g. offer food, drinks or access to a phone).
- If you are indoors, make sure the exit is clear so that the person can leave if they want to. Do not physically stop them from leaving, but encourage them to stay for their own safety so you can help them.
- Call the police or other appropriate help if you think the situation is out of control.
- Be mindful of any objects around the area that could be harmful.
- Make sure only a few people talk to the person. If several people try to get their attention they can become over-stimulated and confused. Staff should:
 - personalise the situation by using their own name and as well as the name of the person in care
 - explain their role and outline the purpose of any treatment provided.
- Do not use any sort of physical restraints on the person unless absolutely necessary for the person's safety or for the safety of other people.

Staff should never chase a person who has inhaled a volatile substance. Physical exertion may increase the risk of sudden death in a person who has inhaled fumes from fuels (e.g. petrol, butane) because it can cause myocardial sensitisation (i.e. make the heart more sensitive to adrenaline and other catecholamines).^{13, 90}

If medication is needed to keep the person safe (see section 4.2.3. Medication), staff who are licensed to prescribe medicines should follow local health service protocols.

While intoxicated and while recovering from intoxication, the person needs to be somewhere they will be safe from further harm (e.g. a ventilated room without access to harmful substances, sheltered from the weather as appropriate, and secure from other threats such as sexual assault or violence).

As a last resort, the person can be referred to a legislated place of safety according to state/territory legislation (see section 3. Legal considerations). Legislated places of safety are locations that have been designated under legislation that enables police to detain people affected by VSU in a place where they can recover safely. Legislated places of safety are for people who do not require emergency treatment or hospitalisation, when they cannot be released into the care of a suitable family member or friend due to lack of availability.⁹¹

4.2.2 Emergency care

Recommendation	Type
Try to calm the person down: <ul style="list-style-type: none"> • Speak to the person in a calm voice and reassure them that they are safe. • Use non-threatening body language. • Take the person to a quiet place (if possible). • Use clear and simple language. • Limit the number of people who are speaking to the person – to avoid confusion. 	CBR
Do not chase a person who has inhaled a volatile substance.	CBR
Avoid physically restraining the person. If restraint is necessary for safety, follow legal requirements and restrictions.	CBR
Manage the situation as an emergency if the person is injured, has collapsed, is unconscious or having a seizure. Follow the DRSABCD steps: <ul style="list-style-type: none"> D. Check for dangers (see section 4.2.1. Maintaining safety). R. Check for a response (e.g. check whether the person is conscious by asking them to squeeze your hand if they can hear you). S. Send for help (e.g. call an ambulance or contact local emergency services). While waiting for the ambulance/emergency help, perform basic first aid. A. Check that the airway is open by carefully tilting the person's head back and gently lifting the chin forward. Clear the airway if it is blocked. B. Check if the person is breathing. C. Commence cardiopulmonary resuscitation if there are no signs of life. Give 30 chest compressions (two compressions per second) followed by two breaths. D. If the person doesn't respond, use defibrillator if available. 	CBR

Staff should try to keep the person calm and should not chase an intoxicated person. Some volatile substances, such as petrol and butane, may cause cardiac sensitisation (i.e. make the heart more sensitive to adrenaline and other catecholamines). Physical activity could lead to serious heart problems, which may cause death.

If the person is very agitated or behaving very unusually, sedation or specialist psychiatric assessment may be needed (see 4.2.3. section Medication).

An intoxicated person should not be physically restrained unless this is absolutely necessary for safety.⁹² If restraint is necessary, legal requirements and restrictions should be followed, local protocols followed, and the reasons recorded as required by local policy. Legislation governing physical restraint for medical treatment varies between state and territory jurisdictions. Within the community, it may be appropriate to ask for assistance from mental health teams, ambulance or police.

The situation should be managed as an emergency if:

- the person is injured
- the person is unconscious or seems to be losing consciousness
- the person has collapsed
- the person is not breathing normally
- the person has a seizure (fit).

Emergency care for a person with acute intoxication due to VSU should be based on the DRSABCD⁴⁸ steps for basic life support.

4.2.3 Medication

These recommendations are intended for health professionals who are authorised to prescribe and administer medicines.

Recommendation	Type
Most cases of acute intoxication due to VSU can be managed by removing the substance and letting the person rest. Sedatives should only be used if necessary for acute behavioural disturbance.	CBR
Medicines should only be prescribed and administered by staff who are authorised to do so, and who are trained and experienced in their use, and in the management of potential related adverse effects of these medicines, including respiratory arrest.	CBR
<p>If medical treatment is necessary to manage intoxication due to VSU, follow your hospital's/health organisation's policy and protocols.</p> <p>If sedation is necessary for the person's safety and there is no applicable policy or protocol, consider one of the following options for managing acute behavioural disturbance due to VSU:</p> <ul style="list-style-type: none"> • midazolam IM* or diazepam oral/rectal/IV (use benzodiazepines with caution due to potential respiratory depression, and only if all of the following apply: the person can be closely observed and vital signs monitored by appropriately trained health professionals, cardiopulmonary resuscitation equipment is available onsite, and staff are trained in cardiopulmonary resuscitation techniques) • olanzapine IM* • haloperidol.* <p>Doses depend on person's body weight, age, other medicines or drugs taken and general health.</p> <p>*not registered in Australia for use in the management of acute behavioural disturbance associated with intoxication due to substance use. Use should be avoided in pre-pubescent children.</p> <p>When prescribing medicines, consider the potential risks of:</p> <ul style="list-style-type: none"> • drug-to-drug interactions with other substances (including medicines and alcohol) • cardiac sensitisation • other adverse effects of medicines. 	CBR

Most cases of acute intoxication due to VSU can be managed with bed rest and oral fluids. Supportive treatment may be necessary (e.g. intravenous fluids to correct metabolic acidosis, paracetamol for headache or fever).

Other medications may be needed if symptoms are severe or if the person shows significant behavioural or psychiatric disturbance. If medication is necessary to manage acute behavioural disturbance where VSU is suspected, local protocols should be followed. If there is no protocol, the options listed in Table 4.2 should be considered. Prescribers should refer to Therapeutic Goods Administration (TGA)-approved product information and other sources of reliable information about potential unwanted effects.

Oral medications should be considered first. If the person is very agitated then parenteral administration should be considered (Table 4.2).

Parenteral sedatives should only be given in facilities with capability for monitoring of vital signs, personnel trained in cardiopulmonary resuscitation techniques, and where appropriate monitoring and resuscitation equipment is immediately available.⁸⁹

The use of as-needed antipsychotic medicines in the management of behavioural emergencies should only be considered if the person is already taking an antipsychotic medicine or the person's behaviour suggests psychotic symptoms, they are intensely agitated, there is a high immediate risk of severe physical danger, or adequate tranquillisation is not achievable with a benzodiazepine alone.⁸⁹ Antipsychotic medicines may lower the seizure threshold and increase the risk of cardiac arrhythmias due to their effect on the QT interval. VSU also lowers seizure threshold and has been associated with cardiac toxicity, so the combination of VSU and antipsychotic medicines may increase the risks of epileptic seizures and cardiac arrhythmias. If these medicines are considered necessary, ensure appropriate monitoring including heart monitoring and serum electrolytes, and ensure that seizures or cardiac arrhythmias can be managed adequately.

Health professionals should only treat a person for acute intoxication due to VSU if they have experience in the use of these medicines in this context. Before administering any medicine, potential risks should be considered, including treatment-related adverse effects, interactions with alcohol or other substances including medicines, and the possibility of cardiac sensitivity. The type and duration of observation required after administration should be considered to enable appropriate planning. Particular caution is needed when treating young people and those with other medical conditions. Blood pressure, pulse rate, hydration status, body temperature, respiratory rate and level of consciousness should be monitored after administering medicines.

All prescription medicines must be ordered only by health professionals who are authorised to prescribe independently (doctors and nurse practitioners) or authorised to initiate medicines by protocol (e.g. under Emergency Rural Access, Standing Orders or Nurse-Initiated Medicines [NSW] protocols).

Note

All hospitals and other clinical organisations should have a policy and explicit treatment protocols for the management of acute intoxication due to VSU, including clear guidance on monitoring procedures and on the management of acute behavioural disturbance.

Table 4.2. Medication options for managing acute behavioural disturbance where acute intoxication due to VSU is suspected

Treatment*	Circumstances in which this option may be considered	Clinical notes
Midazolam (IM)	<p>The person's behaviour is considered to be a psychiatric emergency</p> <p>and</p> <p>full medical services are available onsite and the person can be closely observed by an appropriately trained health professional</p>	<p>Short-acting benzodiazepine</p> <p>Consider a longer acting oral benzodiazepine if the person is very agitated.</p> <p>Consider potential adverse effects including respiratory depression/arrest (risk increased with concomitant use of alcohol and other central nervous system depressants).</p> <p>Note: Midazolam is not registered in Australia for use in the management of acute behavioural disturbance associated with intoxication due to substance use.</p>
Diazepam (oral, rectal or IV)	<p>The person is significantly agitated</p> <p>and</p> <p>trained staff are present who can observe the person for any adverse effects</p> <p>(For IV route: full medical services are available onsite and the person can be closely observed by an appropriately trained health professional)</p>	<p>Long-acting benzodiazepine</p> <p>Consider potential adverse effects.</p> <p>The IM route should be avoided as it can be painful and has slow onset of effect and unpredictable effect.</p> <p>The safety of diazepam for pregnant women has not been established. Benzodiazepines should be avoided during pregnancy unless there is no safer option.</p> <p>Note: If the intravenous route is used, continual close observation is required.</p>
Olanzapine (IM) (Zyprexa IM)	<p>The person is significantly agitated</p> <p>and</p> <p>full medical services are available onsite and the person can be closely observed by an appropriately trained health professional</p>	<p>Do not use olanzapine depot injection (Zyprexa Relprevv).</p> <p>Olanzapine should be used cautiously in patients with a history of seizures or with conditions that lower the seizure threshold.</p> <p>Note: Olanzapine is not registered in Australia for use in the management of acute behavioural disturbance associated with intoxication due to substance use.</p>

...continued

Table 4.2. (continued)

Treatment*	Circumstances in which this option may be considered	Clinical notes
Haloperidol (oral, IM)	The person's behaviour is considered to be a psychiatric emergency, and benzodiazepines and olanzapine are not suitable and full medical services are available onsite and the person can be closely observed by an appropriately trained health professional	Antipsychotic Potential adverse effects include movement disorders due to extrapyramidal reactions (e.g. akathisia, dystonia, parkinsonian effects). Consider benztropine IM to manage drug-induced extrapyramidal disorders (e.g. acute dystonias). Note that potential adverse effects of benztropine include confusion and disorientation. Avoid use in pre-pubescent children. Note: Haloperidol is not registered in Australia for use in the management of acute behavioural disturbance associated with intoxication due to substance use.

IM: intramuscular; IV: intravenous

* Refer to TGA-approved product information before prescribing or administering any medicine. Cautions will depend on which volatile substance/s the person has inhaled.

4.2.4 Monitoring

Recommendation	Type
Initial monitoring (2–4 hours if no complications, or until recovered)	
If possible, arrange for person to be monitored in a clinical setting throughout the period of acute intoxication, regardless of the person's pattern of use.	CBR
<p>In clinical settings:</p> <p>Encourage the person to stay until significantly recovered and it is safe to leave. Monitor the person until recovered* for:</p> <ul style="list-style-type: none"> • cardiopulmonary function (blood pressure, pulse rate, oxygen levels, ECG) • temperature • neurological observations • changes in mood (e.g. heightened anxiety or agitation) • changes in alertness (Glasgow Coma Scale/AVPU scale), clearness of thinking and behaviour. <p>* Usually approximately 2–4 hours from the time of admission for uncomplicated cases, or continued until the person is clinically stable if recovery is delayed</p>	CBR

...continued

Table 4.2.4 Monitoring recommendations (continued)

Recommendation	Type
<p>In other settings:</p> <p>Arrange referral for clinical monitoring, if possible. If clinical referral is not possible, encourage the person to stay until it is safe to leave.</p> <p>Keep watching the person until significantly recovered (e.g. 6 hours) for changes in mood, alertness, clearness of thinking and behaviour.</p> <p>Call an ambulance (if available) or contact local emergency medical services if:</p> <ul style="list-style-type: none"> • the person is becoming more anxious or agitated • the person is losing consciousness or their thinking is becoming less clear (you may have to gently wake the person each time you check) • the person's behaviour is unusual • the person has a seizure • staff do not feel confident to manage the situation. <p>Follow the DRSABCD steps (see recommendations for section 4.2.2 Emergency care)</p>	CBR
<p>The person can go home in the care of a responsible adult when:</p> <ul style="list-style-type: none"> • alert and aware of their surroundings • speaking normally • walking normally • breathing normally • neurological observations normal (if done) • oxygenation normal (if tested). 	CBR
Follow-up monitoring (24 hours)	
<p>After initial monitoring, the person can be released into the care of a responsible adult (such as a family member) if fully recovered and you are confident that their condition is stable.</p> <p>Advise the responsible adult to keep monitoring them for 24 hours after release.</p> <p>Before release, arrange referrals to services that can assist with recovery (e.g. psychological therapies outreach services, drug and alcohol services).</p> <p>In clinical settings:</p> <ul style="list-style-type: none"> • Assess whether the person needs further medical treatment. • Arrange referrals as necessary. • Arrange clinical follow-up. <p>In other settings:</p> <ul style="list-style-type: none"> • Arrange referral to medical services for assessment and treatment. 	CBR

A person recovering from acute intoxication due to VSU needs to be kept safe and watched until they have fully recovered. If possible, the person should be monitored in a clinical setting throughout the period of acute intoxication (approximately 2–4 hours if recovery is uncomplicated or longer if recovery is delayed), even if they regularly use volatile substances. If it is not possible to transfer the person to a medical service, staff should watch them closely and call emergency services if they become unconscious, have a seizure, or their condition becomes worse in any way.

In clinical and non-clinical settings, staff should encourage the person to remain still and rest in a quiet, safe place until they have recovered enough to leave with someone who can continue to watch and look after them. The most important aspects of monitoring a person recovering from acute intoxication are shown in Table 4.3. Staff should reassure the person, treat them with respect and avoid upsetting them. Sedatives should only be used when the person still cannot calm down.

When the person has recovered and staff consider it is safe for them to leave, they should be released into the care of a responsible person (such as a family member). Carers should be advised to keep watching the person and not to leave them on their own for the next 24 hours.

Before the person goes home, staff should assess their needs and risk level, to determine whether they will need further medical treatment/assessment. Referrals should be arranged (see section 6. Comprehensive post-acute assessment), and the person and their carers should be given information about how to contact other services that can help them in their recovery (e.g. psychological therapies or activity programs).

Table 4.3. Monitoring a person recovering from acute intoxication due to VSU

Clinical settings	Non-clinical settings
<p>Monitoring should include the following observations (at intervals as clinically indicated or per local protocol):</p> <ul style="list-style-type: none"> • cardiopulmonary function (blood pressure, pulse rate, respiratory rate, oxygen saturation) • temperature • blood glucose • level of consciousness (Glasgow Coma Scale or AVPU scale) • changes in alertness, clearness of thinking and behaviour • neurological observations • urine tests (ketones, drug screen) • changes in mood (e.g. heightened anxiety or agitation). <p>The patient should be referred to the emergency department or specialist services immediately if there is deterioration in symptoms, loss of consciousness or seizure.</p>	<p>Staff should look for:</p> <ul style="list-style-type: none"> • no sign of breathing (e.g. chest not rising and falling) • abnormal breathing (e.g. loud snoring or gurgling breathing – gently lift the person's chin to clear the airway; if the sound doesn't stop, gently wake them) • poor blood circulation (e.g. sweaty or cold fingertips) • loss of alertness • abnormal mood or behaviour • unclear or strange thinking. <p>An ambulance should be called or local emergency medical services contacted if the person:</p> <ul style="list-style-type: none"> • is losing consciousness (e.g. you cannot wake them) • is still grunting as they breathe after more than 15 minutes • is becoming more anxious or agitated • is becoming less able to think clearly over time • is behaving unusually • has a seizure (fit).

4.3 Summary of evidence and expert opinion

One case series relevant to the management of acute intoxication due to VSU was identified (Table 4.4).⁹³ No randomised controlled clinical trials evaluating treatment options for people with uncomplicated acute intoxication due to VSU were identified.

Table 4.4. Summary of evidence

Evidence summary	Level	References
A retrospective case analysis study of 33 patients with neurological symptoms (100%), vomiting (64%) and metabolic acidosis (27%) following inhalation of methanol-containing carburettor cleaners found that metabolic disturbances resolved within 24 hours in most cases with supportive care alone.	IV	LoVecchio (2004) ⁹³

In addition, five single-case studies were considered for the purpose of prompting discussion, but these did not inform recommendations:

- a case study describing a young woman presenting to an Australian emergency department in an aggressive and self-harming state after inhaling petrol fumes. The author emphasised the importance of maintaining patient dignity, focusing on reducing patient arousal, and avoiding physical restraint if possible, and discussed the use of midazolam.⁹⁴
- a case study describing the air evacuation and management of metabolic acidosis induced by prolonged inhalation of carburettor fluid.⁹⁵
- a case study describing treatment of an inhalant user with a learning disability, seizures, and seven-year history of toluene use. Treatment consisted of charcoal, ipecacuanha and intravenous fluids with sodium bicarbonate.⁹⁶
- a case study describing a 17-year-old boy with prolonged lethargy, ataxia and a toxic serum level of methanol after inhaling carburettor cleaner. The authors discussed ethanol infusion as a treatment.⁹⁷
- a case study describing the use of an unspecified antipsychotic agent in the management of intoxication due to solvent inhalation.⁹⁸

The committee considered that there was insufficient available evidence on which to base EBRs about the management of acute intoxication. Accordingly, CBRs were developed.

The full details of the evidence the committee reviewed on management of acute intoxication are provided in Appendix D Tables 1a–c.

5. Managing withdrawal symptoms

5.1 Dependence and withdrawal

The term 'dependence' is used to describe a person's condition when they have become physically or psychologically dependent on a substance. There is evidence that dependence can occur with volatile substance use (VSU). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) list of substance use disorders includes both inhalant dependence (Table 5.1) and inhalant abuse.⁹⁹

Withdrawal syndrome occurs when a person who is dependent on a substance stops using the substance, and its occurrence is evidence of dependence.³⁶ Although there is some evidence for withdrawal syndrome occurring in people who are dependent on inhaled volatile substances, the evidence is inconsistent. For this reason, inhalant withdrawal is not listed as a clinical disorder by DSM-IV-TR or the International Statistical Classification of Diseases and related health problems 10th Revision (ICD-10).³⁶

Based on available evidence, some experts consider that people who use inhaled volatile substances may experience a withdrawal syndrome.^{38, 39} However, symptoms are generally not severe and last only a few days (two-to-five days in most people, and up to a week in heavy chronic users). If a person experiences prolonged withdrawal symptoms (and the possibility of another medical condition has been considered and ruled out), this probably indicates dependence on the volatile substance/s. Common withdrawal symptoms in people who use volatile substances are listed in Table 5.2.

It may not be possible to distinguish between the signs and symptoms of acute intoxication due to VSU and those of other causes of delirium including head injury, infection (e.g. meningitis, rheumatic fever), metabolic abnormalities (e.g. hypoglycaemia, diabetic ketoacidosis), poisoning due to other chemicals/drugs/snakebite, or other medical conditions.

Table 5.1. Diagnostic criterion for inhalant dependence

A person is dependent on inhaled volatile substances if they have three or more of the following characteristics:

- tolerance for the substance (having to use more over time to get the same effect)
- not being in control (using a larger amount than planned or using for a longer time than planned)
- not being able to cut down or stop using even though they have tried to
- spending a large amount of time obtaining, using or recovering from the effects
- the person's VSU is affecting their social, work or recreation activities
- continuing to use volatile substances despite knowing that VSU can cause physical and psychological problems.

Source: Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)⁹⁹

Table 5.2. Withdrawal symptoms reported after VSU

Runny eyes or nose
Fast heart beat
Trembling
Irritability
Headaches
Nausea
Trouble concentrating
Trouble sleeping
Tiredness
Anxiety
Depressed mood
Twitching
Cravings
Hallucinations

Sources: References 38, 39

5.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on the management of withdrawal symptoms associated with VSU. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

Recommendation	Type
Provide a culturally safe environment during recovery.	PP
Provide a quiet, safe place to recover, where there is nothing to stimulate the person, and make sure they rest and get plenty of sleep.	CBR
Make sure the person eats and drinks plenty of fluids.	CBR
Provide treatment for symptoms, if necessary. In clinical settings: <ul style="list-style-type: none"> • Administer analgesics as required. • Manage anxiety or agitation in line with local treatment protocols. If no local protocol applies, consider administering a short-acting benzodiazepine (e.g. lorazepam or oxazepam). • If benzodiazepines are administered, use an appropriate scale to titrate the dose. In other settings: <ul style="list-style-type: none"> • Give paracetamol if the person has a headache or a high temperature. • If pain is not relieved, arrange medical assessment. 	CBR

...continued

Table 5.2 Recommendations (continued)

Recommendation	Type
<p>Monitor the person's recovery.</p> <p>In clinical settings:</p> <ul style="list-style-type: none"> • Take frequent regular observations (blood pressure, pulse rate, respiratory rate, temperature, oxygen saturation). • Monitor for signs of head injury or infections (e.g. pneumonia). • Monitor requirement for and effects of medicines. <p>In other settings:</p> <p>Check the person frequently and regularly and monitor any change in symptoms.</p> <p>Arrange medical assessment immediately if:</p> <ul style="list-style-type: none"> • symptoms become worse • the person has trouble breathing • the person has any physical problems • the person is agitated or anxious • the person is not becoming more alert over time • the person is behaving in an unusual way. 	CBR

Withdrawal symptoms can usually be managed with basic supportive treatment. The appropriate management of withdrawal symptoms depends on the setting and available resources.

A person recovering from VSU and experiencing withdrawal symptoms needs a culturally safe environment and a quiet, safe place with minimal stimulation. This can include day detoxification facilities and drop-in centres.

Staff should make sure the person can rest and gets plenty of sleep, keeps eating, and drinks plenty of fluids while recovering.

5.2.1 Clinical settings

Healthcare workers should be aware of the range of withdrawal symptoms so that they can provide effective treatment for people recovering from VSU. In order to understand and effectively manage a person's withdrawal symptoms, the health care worker should try to determine the person's motivation for using volatile substances (e.g. intoxication, self-medication for anxiety, arousal, or appetite suppression).

Paracetamol should be administered as required for headaches or elevated body temperature. Other symptomatic and supportive treatment may be necessary. Anxiety or agitation should be managed in line with local treatment protocols. If no local protocol applies, administration of a short-acting benzodiazepine may be considered.

The person should be monitored closely during recovery, with particular attention to possible signs of head injury or infections such as pneumonia.

If symptoms persist, the person should be assessed for comorbid conditions (see section 13. Managing co-existing health conditions).

5.2.2 Non-clinical settings

Simple analgesics such as paracetamol may be given if the person has a headache or is in pain. If significant pain is not relieved, medical assessment should be arranged.

The person should be monitored frequently and regularly for any change in symptoms. Medical assessment should be arranged immediately if symptoms become worse, the person has trouble breathing, has any physical problems, is agitated or anxious (this could be a sign of other illness), is not becoming more alert over time, or is behaving in an unusual way.

5.3 Summary of evidence and expert opinion

No randomised controlled clinical trials or case series relevant to the management of withdrawal symptoms were identified.

Four single-case studies were considered for the purpose of prompting discussion, including three describing interventions for co-occurring VSU dependence and mental health disorders,¹⁰⁰⁻¹⁰² and two that attributed reduction in VSU to medications in patients who had not responded to psychological therapies.^{102,103} These case studies did not inform recommendations:

- a case study describing the use of daily buspirone in a patient with petrol inhalation dependence, leading to a reduction in craving and reduced use.¹⁰³
- a case study describing the use of risperidone in a patient with symptoms of inhalation-induced psychosis due to petrol and/or carburettor cleaning fluid, which reported a reduction in cravings and other withdrawal symptoms.¹⁰⁰
- a case study describing the use of valproate in a patient with a dual diagnosis of bipolar disorder and petrol inhalation dependence, which suggested that the diagnosis of a primary mood disorder should be considered in patients with psychotic symptoms who use volatile substances.¹⁰¹
- a case study describing the use of lamotrigine in a patient with unspecified VSU and comorbid anxiety and depression, which attributed reduction in VSU to the therapy.¹⁰²

The committee considered that there was insufficient available evidence on which to base EBRs about the management of withdrawal syndrome following VSU. Accordingly, CBRs were developed.

Based on available evidence, the committee agreed that:

- dependence on inhaled volatile substance can be associated with withdrawal syndrome, and that symptoms are generally not severe and do not persist for more than two-to-five days
- withdrawal symptoms can include irritability, anxiety, depression, aggressive behaviour, headaches, sleep disturbance, tremors, dizziness, nausea and cravings
- it can be difficult to identify the cause of symptoms, because the person may have used multiple substances, and because some behavioural symptoms, such as problems controlling impulses, are common among people who use inhaled volatile substances and may not be due to the substance.

The full details of the evidence the committee reviewed on management of withdrawal symptoms are provided in Appendix D Table 2a.

6. Comprehensive post-acute assessment

6.1 Initial and further assessments for VSU

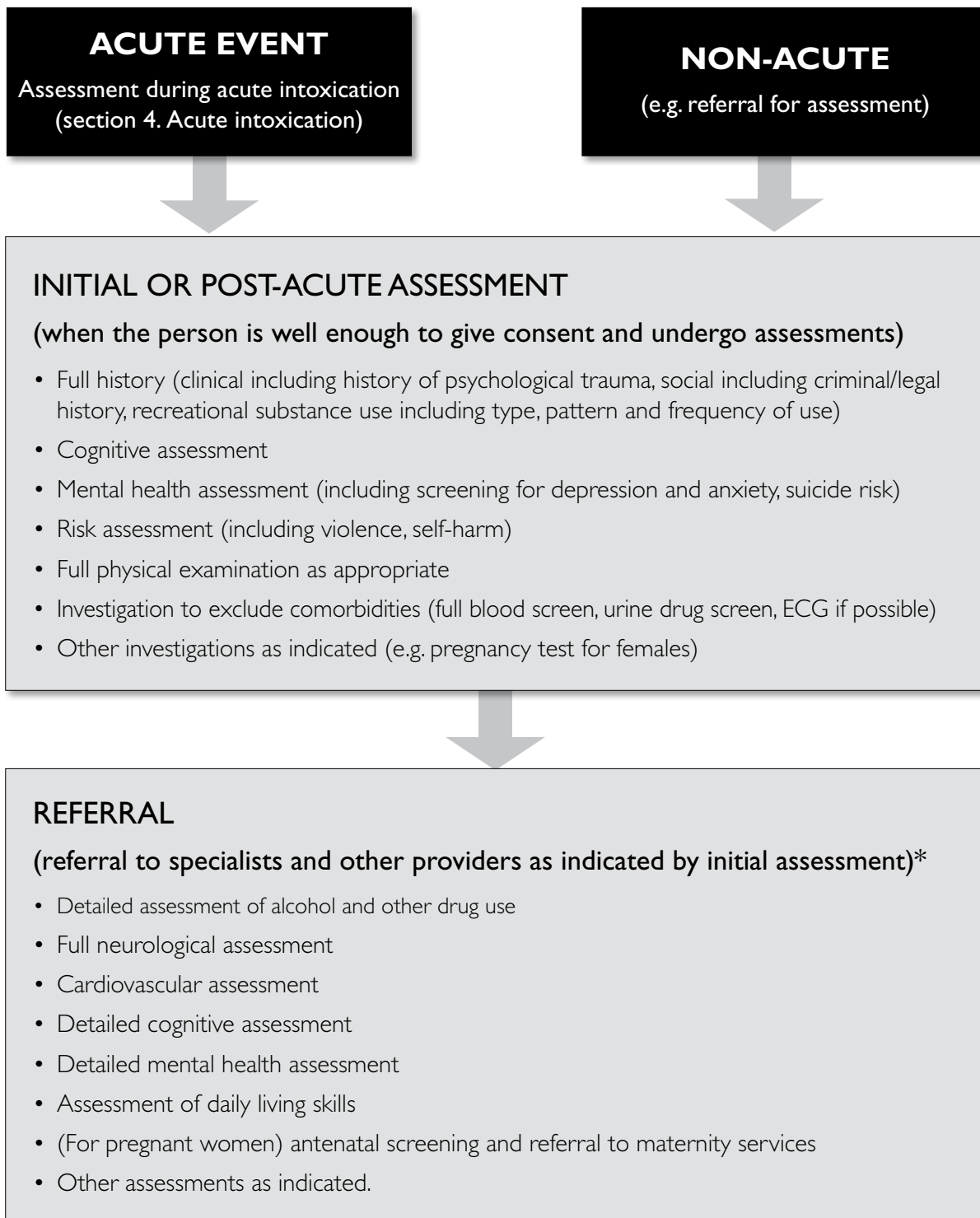
The first point of contact with a person who uses inhaled volatile substances is usually brief and occurs during an emergency or when the person is acutely intoxicated (see section 4. Managing acute intoxication). Often, only basic assessments are possible at that time, because the person cannot give their consent to any investigations and cannot give their full attention to working with health professionals and other staff.

After someone has recovered from an episode of acute intoxication due to volatile substance use (VSU), and after recovery from withdrawal symptoms (if any), an initial assessment should be undertaken to measure baseline function, assess risk and determine if full assessment is required. This initial assessment can be made immediately after contact that has occurred during acute intoxication, or when a health worker (e.g. general practitioner, Aboriginal health worker, practice nurse and/or community nurse) sees a known volatile substance user in other circumstances, such as following referral to the service.

A number of assessments need to be made (Figure 6.1). How these assessments are organised and completed over time depends on local protocols, available resources and opportunity. During each visit, the type of assessments that can be made depends on whether the person is able to and agrees to participate. Usually, comprehensive assessment cannot be completed in a single session, and can be done over several sessions and by several different health workers.

Initial assessment may indicate that further assessment is necessary to identify the person's physical, mental and cognitive health issues and needs.¹⁰⁴ Assessments should be made when the person enters a treatment with a service, during treatment, and when they exit the service, as well as at follow-up and discharge planning, so that the effects of treatment can be compared with baseline measurements.¹⁰⁴

Figure 6.1 Comprehensive assessment after recovery from acute intoxication



*Referrals will depend on availability of specialists (e.g. assessment by a specialist in addiction medicine or an alcohol and other drug service is ideal, but may not be available in some communities).

Figure 6.1 lists assessments that should be carried out for all patients, where possible and appropriate. Where some assessments cannot be made (e.g. due to limited resources), health workers should consider whether or not referral is indicated, after considering individual risk.

6.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on comprehensive post-acute assessment. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

6.2.1 Assessment considerations

Recommendation	Type
Comprehensive assessment should be made when the person has recovered from acute intoxication.	CBR
Explain the purpose of the assessment and obtain the person's consent before conducting any assessments (see section 3.1.2 Informed consent). Consent may include consent to share information with other agencies involved in the person's care.	PP
Assessments should be carried out in the person's first language, where possible. If it is not possible for the assessor to perform the assessment in the person's first language, an interpreter should be present during the assessment.	PP

When undertaking any assessment it is important to:¹⁰⁵

- explain the reason for the assessment and the purpose of each set of questions
- explain that it is standard procedure
- explain how the assessment can help the person achieve their goals
- provide appropriate and timely feedback of the results of the assessment.

Assessments should be carried out in the person's first language, where possible. Where not possible, an interpreter should be present during the assessment.

The person's consent should be obtained before conducting any assessments (see section 3.1.2. Informed consent). It may be helpful to obtain the person's consent to share information with other agencies or services involved in their care, to avoid the need for other agencies to repeat aspects of history and examination.

Health workers must be aware of statutory obligations concerning the welfare of children (e.g. notification of child protection services). These obligations vary according to state and territory legislation.

6.2.2 Initial/post-acute assessment

Recommendation	Type
<p>The initial or post-acute assessment should include (if possible):</p> <ul style="list-style-type: none"> • a clinical and social history (e.g. illnesses and injuries, medical treatments, accommodation, occupation, relationships) • recreational substance use history (types of inhaled substances used, frequency, quantity, alcohol and other drug use) • brief cognitive assessment (e.g. Mini-Mental State Examination) • screening for mental health conditions using a validated instrument (e.g. Kessler Psychological Distress Scale – K10, Strong Souls) • assessment of risk for violence or self-harm • physical examination • laboratory investigations (full blood screen, urine drug screen), ECG if possible • pregnancy test for females, if indicated • further investigations as indicated. <p>If any of these assessments cannot be made during the initial assessment, they should be completed as soon as possible (in stages, if necessary).</p>	<p>CBR</p>

The primary purpose of an initial assessment is to measure baseline function, assess risk and determine if a full assessment is required. The first contact with a person who uses inhaled volatile substances is often brief, so staff should focus on screening processes.

Initial assessment focuses on assessment of cognitive function, neurological function and whether the person has other mental health problems, because these are critical factors in determining the most appropriate management options. Table 6.1 lists examples of tools for assessing cognitive function and psychosocial and emotional wellbeing.

If possible, the initial assessment should include a brief clinical and social history (e.g. illnesses and injuries, medical treatments, accommodation, occupation, relationships), a brief cognitive assessment (e.g. using the Mini-Mental State Examination),^{106,107} a brief mental health screen (e.g. Kessler Psychological Distress Scale – K10¹⁰⁸⁻¹¹¹ or Strong Souls^{112,113}), recreational substance use history (types of inhaled substances used, frequency, quantity, other drug use, physical examination, and a full blood screen. Other tests (e.g. pregnancy test, tests for hepatitis B and C, test for syphilis (epidemic regions) or tests for other sexually transmitted infections), or further investigations should be included as indicated. Assessments that cannot be made during the initial assessment should be completed as soon as possible, over a number of visits, if necessary.

Note

Patients may be eligible for Medicare Benefits Schedule (MBS) Primary Care Items such as the Health Assessment for Aboriginal and Torres Strait Islander People or other MBS Health Assessments Items (information available at http://www.health.gov.au/internet/main/publishing.nsf/Content/mbsprimarycare_mbsitem_general_factsheet).

The Central Australian Rural Practitioners Association (CARPA) standard treatment manual includes guidance on conducting health checks for Aboriginal and Torres Strait Islander people.¹¹⁴

Table 6.1. Assessment tools

Name of tool and description	Suitability*
Assessment of cognitive function	
<p>Mini-Mental State Examination (MMSE)^{106,107} (www.minimental.com)</p> <p>A brief standardised instrument used to assess cognitive functioning in adults</p> <p>Assesses five areas of cognitive function: orientation, registration, attention and calculation, recall, and language</p> <p>Can be used to screen for cognitive impairment and estimate the severity of the cognitive impairment</p>	<p>Suitable for adult non-Indigenous populations</p> <p>Less suitable for Aboriginal and Torres Strait Islander communities because of cultural and language biases¹¹⁵</p> <p>A modified MMSE can be used in children.</p>
<p>Kimberley Indigenous Cognitive Assessment (KICA)^{111,116,117} (www.wacha.org.au/kica.html)</p> <p>Originally developed as a tool for assessing dementia in older Aboriginal people, but now used for wider populations</p> <p>Suitable for wide population because it includes visual material and basic questions</p> <p>Made up of components that can be used independently – includes a component that assesses cognitive function (KICA-Cog), which can be used alone as a cognitive screening tool</p> <p>Enables reliable assessment of frontal lobe function (a region affected by VSU)</p> <p>Useful for collecting other history including medical history, family history and activities of daily living</p>	<p>Validated for use with older Indigenous Australians¹¹⁸</p> <p>Although the KICA instrument has been specifically developed and validated in older Aboriginal people as a diagnostic instrument, it is sometimes used in the context of VSU as a brief screening tool to provide an indication of cognitive impairment and the pattern of brain deficit.</p> <p>Involvement of a trained interpreter is recommended when the KICA is conducted when English is not the person’s first language.</p>
<p>CogState¹¹¹ (www.cogstate.com)</p> <p>A computerised nonverbal tool for assessing cognitive functioning</p> <p>Uses culture-neutral stimuli</p>	<p>Validated for use in a range of populations including Aboriginal adults and adolescents¹¹¹</p> <p>Also validated for use with non-Indigenous children¹¹⁹ and VSU populations³⁵</p> <p>Primarily used as a research tool</p> <p>Can be downloaded from the internet and administered on any computer</p>
<p>Cambridge Neuropsychological Test Automated Battery (CANTAB)^{111,120,121}</p> <p>A computerised nonverbal tool for assessing cognitive functioning</p> <p>An effective tool for cross-cultural assessments and for individuals with English as a second language</p>	<p>Validated for use in a range of populations including Aboriginal adults and adolescents¹¹¹</p> <p>Also validated for use with non-Indigenous children¹²¹ and VSU populations^{28,31,122}</p> <p>Requires a touch-screen computer</p>

...continued

Table 6.1. (continued)

Name of tool and description	Suitability*
Assessment of psychosocial and emotional wellbeing	
<p>Kessler Psychological Distress Scale (K10)¹⁰⁸⁻¹¹¹</p> <p>Screening tool for anxiety and depression based on self-report</p> <p>Contains 10 questions about negative emotional states experienced during the four-week period leading up to the assessment</p> <p>Modified version containing 6 of the 10 questions (K6)^{108,123,124} has been shown to be robust in measuring severity of psychological distress.¹²⁴</p>	<p>Widely used in population surveys globally</p> <p>Validated in the Australian adult population¹²⁵</p> <p>K10 (and K6) has been used in surveys among Aboriginal and Torres Strait Islander populations¹²⁶⁻¹²⁸</p>
<p>The Westerman Aboriginal Symptom Checklist for Youth – Revised (WASC-Y)^{129,130} (www.indigenopsychservices.com.au)</p> <p>A measure of self-reported:</p> <ul style="list-style-type: none"> • depression • anxiety • suicide • alcohol/drug use • impulsivity • cultural resilience. 	<p>Validated for use with young Aboriginal people (13–17 years)¹²⁹</p> <p>Validated in a VSU population¹¹³</p>
<p>Strong Souls¹¹²</p> <p>A measure of self-reported physical, emotional, social and spiritual wellbeing including:</p> <ul style="list-style-type: none"> • depression • anxiety • suicide risk • resilience. 	<p>Validated for use with young Aboriginal people (13–19 years)¹¹²</p>
<p>Life Events Scale¹³¹</p> <p>(also known as the Social Readjustment Rating Scale (SRRS) or the Holmes and Rahe Stress Scale)</p> <p>A measure of self-reported stressful events experienced over the past 12 months</p> <p>Ranks events from the most stressful to the least stressful and individual rank</p>	<p>Validated in adult populations¹³²</p> <p>Modified version developed for adolescents¹³³</p> <p>May not be the most appropriate instrument for Aboriginal and Torres Strait Islander peoples as it may not capture the full range of stressors they experience¹¹⁵</p> <p>Widely used in population health research</p>

...continued

Table 6.1. (continued)

Name of tool and description	Suitability*
Assessment of psychosocial and emotional wellbeing (continued)	
<p>HEADSS¹³⁴ Screening tool for undertaking a psychosocial history and health risk assessment with a young person</p> <p>Assesses functioning in:</p> <ul style="list-style-type: none"> • home life • education/employment • peer-group activities • drugs • sexuality • suicide/depression. 	<p>Developed specifically for use with adolescents</p> <p>Reliability and validity not clearly demonstrated¹³⁵</p>
<p>The Indigenous Risk Impact Screen (IRIS)¹³⁶ A culturally secure, 13-item screening instrument for alcohol and other drug use and mental health risk</p>	<p>Validated for use with Aboriginal and Torres Strait Islander adults¹³⁶</p>
<p>Patient Health Questionnaire Nine-Item Depression Module (PHQ-9)^{137,138} An instrument (depression scale from the Patient Health Questionnaire) containing nine items based on the diagnostic criteria for major depressive disorder in the Diagnostic and Statistical Manual Fourth Edition (DSM-IV)¹³⁹</p> <p>A modified version containing the first two items (the Patient Health Questionnaire 2 [PHQ-2]) can be used to screen for depression and indicate if further evaluation for depression should be undertaken using the PHQ-9.¹⁴⁰⁻¹⁴²</p>	<p>PHQ-9 and PHQ-2 validated for use with adolescents^{143,144}</p> <p>A modified version of the PHQ-9 has been tested with Aboriginal and Torres Strait Islander adults, but validity has not been clearly demonstrated¹⁴⁵</p>

* Some tools require specific training. Selection of tools to administer in each facility will depend on local policy, protocols and staff skills.

6.2.3 Further assessment including specialist assessment

Recommendation	Type
<p>Specialist assessment should be arranged as indicated and may include the following:</p> <ul style="list-style-type: none"> • detailed assessment of substance use (specialist in addiction medicine or alcohol and other drug service) • full neurological assessment (e.g. neurologist) • cardiovascular assessment (e.g. cardiologist) • detailed cognitive assessment (e.g. psychiatrist/child and adolescent psychiatrist, clinical psychologist/child psychologist) • detailed mental health assessment (e.g. psychiatrist/ child and adolescent psychiatrist, clinical psychologist/child psychologist) • assessment of daily living skills (e.g. occupational therapist) • other assessments as indicated (e.g. paediatrician, speech pathologist). 	<p>CBR</p>

...continued

Table 6.2.3 Further assessment including specialist assessment (continued)

Recommendation	Type
<p>When caring for a pregnant woman who uses inhaled volatile substances:</p> <ul style="list-style-type: none"> • arrange standard antenatal care (including blood tests, physical examination and other routine investigations) if she has not been in contact with medical services while pregnant • arrange referral to an obstetrician for a high-risk pregnancy assessment. 	<p>CBR</p>
<p>If more information is required to clarify aspects of the person's history (e.g. developmental history, occupational history, mental health history, family medical and social history including substance use and mental illness, injuries, education and forensic history), consider contacting other people or services (subject to ethical and legal considerations including privacy legislation):</p> <ul style="list-style-type: none"> • family • hospital admissions • police • department of justice • schools. 	<p>CBR</p>

Further assessment aims to gather information to develop plans for referral and case management.

If initial assessment indicates full assessment is necessary, this should be carried out by the person's primary care team (e.g. general practitioner, Aboriginal health worker, practice nurse and/or community nurse) and should include comprehensive health assessment, ECG, basic antenatal screening and referral to maternity services for pregnant women, and referral/s to specialists as indicated (e.g. specialist in addiction medicine or alcohol and other drug service, neurologist, cardiologist, psychiatrist, clinical psychologist, paediatrician), or other health professionals such as occupational therapists or speech pathologists. A full health assessment requires significant time and resources, and should only be undertaken when initial assessment indicates that this is warranted.

When caring for a pregnant woman who uses inhaled volatile substances, she should be referred to antenatal care, including a high-risk pregnancy assessment by an obstetrician.

Information obtained from the person is not always reliable. Sometimes it is helpful to verify information with their family member/s or obtain information about the person from other services such as school or police. Often workers will know the individual and their family through prior interactions. These relationships are important for follow-up assessment.

6.3 Summary of evidence and expert opinion

Two studies relevant to post-acute assessment of people with a VSU condition were identified (Table 6.2).^{39,146} Both were validation studies evaluating the use of assessment tools, but neither reported clinical outcomes.

Table 6.2. Summary of evidence

Evidence summary	Level	References
A study evaluating the reliability of Form 90D (an interview-based instrument) in quantifying drug use concluded that this tool was reasonably reliable and valid for measuring the occurrence and frequency of lifetime and recent drug use. The tool was most reliable for global drug use measures but less reliable for measuring use of some categories of substance use, including VSU.	IV	Westerberg (1998) ¹⁴⁶
A study evaluating the reliability of DSM-IV Substance Abuse Module diagnoses for inhalants (aerosols, gases, nitrites, and solvents) concluded that test–retest reliability of the criteria for diagnosis were good to excellent across the subtypes except for solvents. Criteria for dependence were poor for solvents and aerosols.	IV	Ridenour (2007) ³⁹

The committee considered that there was insufficient available evidence on which to base EBRs about comprehensive assessment. Accordingly, CBRs were developed.

The committee agreed that:

- The care of people who use volatile substances should include comprehensive assessment undertaken when the person is not acutely intoxicated, and should be based on a biopsychosocial approach that includes assessment of cognitive function and developmental history. The reliability and comprehensiveness of assessment can be enhanced by gathering information from other services and family members.
- Initial screening should be undertaken for all types of volatile substance users. Full assessment should be undertaken as indicated. However, full assessment may only be warranted for chronic users because it is time- and resource-intensive.
- Pregnant women who use volatile substances should be referred to appropriate maternity services for a high-risk pregnancy assessment. Basic elements of antenatal care should be undertaken if the woman has not previously been in contact with medical services.
- Assessment should be carried out in the individual’s first language. Where this is not possible, staff should arrange for an interpreter to be present at the assessment.

The committee acknowledged the difficulties in undertaking assessments with this population and noted that not all assessments will be applicable or possible in all cases. Informed consent will often guide how far the individual will go through the assessment process.

The full details of the evidence the committee reviewed on post-acute assessment are provided in Appendix D Tables 3a–c.

7. Brief intervention

7.1 Brief intervention in VSU

In the context of volatile substance use (VSU), brief intervention generally refers to any unplanned action taken by a health worker, when the opportunity arises, to reduce a person's risk due to VSU. Brief interventions for VSU generally take from five minutes to two hours of a health worker's time, are delivered one-to-one, and involve raising awareness, sharing knowledge and getting a person thinking about making changes to improve their health.¹⁴⁷ Brief intervention for substance use aims to reduce harm by providing:¹⁴⁸⁻¹⁵⁰

- information and advice about the harms associated with substance use
- information and advice about how the person can reduce or stop their substance use, and encouragement and support to achieve this
- information on minimising risks for those who do not intend to give up their substance use.

Brief intervention can be effective at any time, depending on the person's readiness to change an unhealthy behaviour, but it is best to take the opportunity as early as possible to prevent problems developing.¹⁴⁷ Brief intervention for VSU is often part of a strategy for early intervention, which attempts to prevent or reduce harm by targeting people who are at risk of VSU or use occasionally, but are not yet regular or chronic users. Brief interventions can also help identify and encourage individuals with heavier use patterns, who may need referral for specialised assessment and treatment.¹⁴⁹

Brief intervention is not appropriate for people who:

- are intoxicated
- are physically unwell
- may have mental health conditions that require further assessment (see section 13. Managing co-existing health conditions)
- may not understand the information because of brain damage, intellectual disability or severe psychiatric illness.

7.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on brief intervention in the management of VSU.

While it is noted that there is evidence for the use of brief intervention in the management of unhealthy drug and alcohol use, there is no evidence for brief intervention specifically for VSU. Consensus-based recommendations (CBR) were formulated based on expert opinion.

Recommendation	Type
All health care workers who have contact with people who use volatile substances should provide brief intervention whenever there is an opportunity to do so (if they have the appropriate training and skills).	CBR
Brief intervention should include giving the person clear, factual information about the health risks of VSU and the benefits of quitting.	CBR

7.2.1 Who should deliver brief intervention?

Brief interventions can be delivered opportunistically in a wide range of settings. Providing effective brief intervention requires specific knowledge, skills and/or experience. Health care workers who are able to deliver brief intervention include nurses (hospital nurses, community nurses and practice nurses), general practitioners, Aboriginal health workers, alcohol and other drug workers and allied mental health workers.

Training and other resources are available for healthcare workers to increase skills in brief intervention for VSU (Table 7.1).

Table 7.1. Resources for brief intervention

<p>Local contacts</p> <p>Contact local drug and alcohol agencies that work in the area of VSU (listed at the end of this guideline) for information on professionals/agencies who can deliver brief intervention.</p> <p>Contact details for alcohol and other drug services in each state and territory are listed at the end of this guideline.</p> <p>Training</p> <p>Information about training opportunities can be obtained from:</p> <ul style="list-style-type: none"> • the primary care organisation in your region, state or territory • National Centre for Education and Training on Addiction • Alcohol and other Drugs Council of Australia • Central Australian Rural Practitioners Association. <p>Training materials</p> <p>Henry-Edwards S, et al. <i>Brief intervention for substance use: a manual for use in primary care</i>. (draft version 1.1 for field testing). Geneva: World Health Organization; 2003.¹⁴⁹</p> <p>South Australia Alcohol and Other Drug Nursing and Midwifery Statewide Action Group. <i>Alcohol, tobacco and other drugs guidelines for nurses and midwives: clinical practice guidelines Version 2</i>. Adelaide: Flinders University and Drug and Alcohol Services Council, South Australia; 2003.¹⁵⁰</p> <p>Resources for brief intervention in VSU</p> <p>Aboriginal Drug and Alcohol Council (SA) Inc. <i>Petrol sniffing and other solvents: a resource kit for Aboriginal communities</i>. Adelaide: Department of Human Services South Australia; 2000.¹⁵¹</p> <p>Cairney S, Fitz J, Menzies School of Health Research. <i>Sniffing and the brain</i>. [Flipchart] Darwin: Niblock Publishing; 2005.¹⁵²</p> <p>Cairney S, Fitz J, Menzies School of Health Research. <i>When boys and men sniff</i>. [Flipchart]: Darwin: Niblock Publishing; 2008.¹⁵³</p> <p>Cairney S, Fitz J, Menzies School of Health Research. <i>When girls and women sniff</i>. [Flipchart]: Darwin: Niblock Publishing; 2008.¹⁵⁴</p> <p>Central Australian Rural Practitioners Association. "Brief interventions", Chapter 4. Chronic diseases. <i>CARPA standard treatment manual</i>. 5th ed. Alice Springs: Central Australian Rural Practitioners Association; 2009. p. 216-219.¹⁵⁵</p> <p>State Government of Victoria Department of Human Services. <i>About inhalant abuse</i>. For health and community workers. Melbourne: Drugs Policy and Services Branch, Department of Human Services; 2002.¹⁵⁶</p> <p>Other contacts</p> <p>Australian Drug Foundation provides professional development resources and other information on VSU.</p> <p>The National Inhalants Information Service (http://www.inhalantsinfo.org.au) provides information about VSU for health workers and communities and provides assistance with training in VSU management.</p>

Note

All healthcare workers who may have contact with people who use volatile substances should make sure they have skills to undertake brief intervention.

7.2.2 Strategies used in brief intervention

Brief intervention is often in the form of brief advice or counselling given when the opportunity arises (e.g. when the health worker becomes aware that the person uses volatile substances or is ready to talk about their VSU). Some approaches to brief intervention are listed in Table 7.2.

Table 7.2. Brief intervention approaches

Brief self-report screening tests with feedback
Verbal advice (e.g. direct feedback based on screening test or when the issue of VSU is raised) and information on harms and risks associated with use
Written information (e.g. self-help materials, patient brochures, newsletters)
Brief psychological intervention (e.g. brief counselling, motivational interviewing)

Brief intervention often commences with a brief screening process to help determine the level of risk and level of intervention required. Several questionnaire-based techniques are used for screening for substance use, such as the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).¹⁵⁷ ASSIST consists of eight questions to identify:

- substances people have ever used
- substances used in the past three months
- problems related to substance use
- risk of current or future harm
- dependence.

When screening indicates that a person is at high risk of developing health problems, he or she may benefit from other forms of interventions such as referral for more comprehensive assessment and treatment.¹⁴⁸ When screening indicates that a person has moderate risk of developing health problems due to substance use, an appropriate brief intervention may involve brief advice and arranging more intensive counselling. For all others, appropriate brief intervention may include advice about risks and harms of substance use, advice about strategies for reducing or giving up, and contact details for support services if required.

The FRAMES approach (Table 7.3) can be used as a guide to brief intervention.¹⁵⁸

Table 7.3. The FRAMES model for brief intervention

Component	Description
Feedback	Provide feedback about the person's own personal risk due to their current usage patterns (using information gained from screening questions).
Responsibility	Encourage the person to acknowledge responsibility for their own behaviour and emphasise that only they have the power to change their behaviour.
Advice	Provide clear advice about the person's substance use problem and encourage them to consider changing or seeking further treatment.
Menu	Give the person a set of options that may help them take control of their substance use.
Empathy	Consider the situation from the person's perspective.
Self-efficacy	Point out the person's strengths and abilities that they can use to overcome their substance use behaviour.

7.3 Summary of evidence and expert opinion

No clinical trials or case series relevant to the role of brief intervention or early intervention in the management of VSU were identified (see Appendix D Table 4a).

The committee considered that there was insufficient available evidence on which to base EBRs about brief intervention. Accordingly, consensus-based recommendations (CBRs) were formulated based on expert opinion.

Drawing on evidence for the use of brief interventions in the wider field of substance use management in general, and on clinical experience in the use of brief intervention in VSU in particular, the committee agreed that:

- Brief intervention should be provided for users of inhaled volatile substances.
- Brief intervention can be provided opportunistically at low cost by a wide range of healthcare workers. All healthcare workers who may have contact with people who use volatile substances should be trained and supported to provide brief intervention.

The committee made no specific recommendations on early intervention in the management of VSU because no evidence on the role of early intervention in the management of VSU was identified in the literature search and because there was general consensus among committee members that the effects of early intervention in VSU are unclear to experts in the field.

8. Case management

8.1 Case management in VSU

People who use volatile substances very often have complex needs that may require long-term commitment by service providers. Effective communication and collaboration between providers involved in a person's care increase the likelihood that they will remain in contact with services and that they will have better health outcomes. Advocates of case management for volatile substance use (VSU) argue that this approach reduces consumption and reduces harm. Improving the person's contact with appropriate services is thought to increase periods of abstinence therefore improve symptoms (see Case study: case management for VSU).

Various models of case management have been applied to people who use substances. Case management approaches to the care of people who use inhaled volatile substances are largely based on models designed for people with mental illnesses.

Case management aims to improve clients' levels of contact with health services and encourage them to stay engaged with services, to reduce the frequency of admissions to acute services, and to improve outcomes such as quality of life and social functioning.^{159,160}

While there is substantial variation between definitions of case management and delivery models, case management generally involves the following components:^{160,161}

- assessing the individual's needs
- formulating a tailored care plan
- coordinating appropriate care from multiple providers
- monitoring the quality of the care provided
- maintaining contact with the individual.

In remote Australian regions, resources needed for case management may not be available within existing services.

There is useful information on case management in: Jenner L, Devaney M, Lee N. *Case management in alcohol and other drug treatment settings*. Melbourne: Turning Point Alcohol and Other Drug Centre; 2009.¹⁶¹

What is case management?

The Case Management Society of Australia^{iv} defines case management as 'a collaborative process of assessment, planning, facilitation and advocacy for options and services to meet an individual's health needs through communication and available resources to promote quality cost-effective outcomes'.¹⁶²

A single point of contact through which the client accesses all services related to care is fundamental to a case management approach.

^{iv} The Case Management Society of Australia has adopted the definition used by the Case Management Society of America (www.cmsa.org).

Case study: Case Management for VSU

Sally* began experimenting with sniffing paint in her early teens and at age 15 began sniffing regularly. Throughout her adolescence she had contact with a range of health and other services – usually for a brief period and following a crisis (including pneumonia and episodes of psychosis). For about five years, Sally was homeless ('couch-surfing') and continued to make sporadic contact with youth, health, drug and alcohol, and hospital services, all of which had little contact with each other.

Sally's health declined significantly. Her vision was impaired and worsening, she experienced mood swings and violent tremors that made it extremely difficult to use her hands normally (e.g. when eating).

During this time, community members and service providers were becoming increasingly concerned about VSU in the region. In response to these concerns a primary healthcare service set up a 'forum' comprising of service providers who agreed to work together. This group provided reliable information to the anxious community, assisted with the development of protocols to manage intoxication in both clinical and non-clinical settings, and encouraged responsible retail practices that aimed to limit supply of 'sniffable' products. A major focus of the group was the improvement of inter-agency case management through identification of referral pathways, improvement of case management protocols and sharing of information and skills.

Because of this initiative, the service providers that Sally had previously seen separately began to work together collaboratively. Sharing a labour-intensive approach that involved working closely with Sally's family, service providers over the next two years were able to develop and make better progress with care plans.

Support was provided to enable Sally to complete a comprehensive general health and specialist (neurological) assessments. The somewhat frightening results of these assessments motivated her to spend some time in residential rehabilitation and also commit to other treatments.

Despite episodes of relapse, Sally is now maintaining longer periods of abstinence and enjoying improvements in both her health and her family relationships.

Source: J Robertson (VSU Guideline Development Committee)

*Typical (not actual) case

8.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on case management. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

Recommendation	Type
Case management should be offered to all chronic volatile substance users, if possible.	CBR
Case management should be offered to all pregnant volatile substance users, if possible.	CBR
Consent must be given by the person before their information can be shared between care providers and services.	PP

...continued

Table 8.2 Recommendations (continued)

Recommendation	Type
When multiple providers/services are involved in providing a person's care, they should negotiate to appoint a single coordinating service. The coordinating service should: <ul style="list-style-type: none"> • take responsibility for coordinating referrals and follow-up • nominate one person to be the person's main point of contact • ensure all relevant information is shared between provider services, subject to the person's consent • maintain clear and effective communication between provider services. 	PP
The coordinating service should encourage the person's family to be involved in the case management process and should consult family members as appropriate.	PP
An interpreter should be involved if the main designated case manager does not speak the person's first language.	PP
Care plans should be culturally appropriate.	PP

8.3 Summary of evidence and expert opinion

One case series relevant to a case management approach in the management of VSU was identified (Table 8.1).¹⁶³

Table 8.1. Summary of evidence

Evidence summary	Level	References
A case series that included five users of volatile substances reported some positive outcomes of case management for VSU in juvenile justice settings. The study did not report characteristics of volatile substance users such as pattern of use, comorbid conditions, behavioural problems or pregnancy.	IV	Clough (2008) ¹⁶³

The committee considered that there was insufficient available evidence on which to base EBRs about case management for VSU. Accordingly, CBRs were developed.

The full details of the evidence the committee reviewed on the role of case management for VSU are provided in Appendix D Tables 5a–c.

9. Education

9.1 Health education in VSU management

Health education in the management of volatile substance use (VSU) aims to prevent people from choosing to begin inhaling volatile substances, to help users quit, to keep safe those who continue to use volatile substances, and to equip healthcare workers to manage VSU effectively.

Current strategies for educating communities about VSU include:¹⁴

- universal drug education programs
- programs targeting communities
- programs targeting young people at risk for VSU
- programs for people who use inhaled volatile substances.

Methods include:

- fact sheets
- community radio and newspapers
- posters
- mentoring programs
- therapy
- school education programs
- peer education workshops or programs.

Education that targets potential users, such as adolescents who may be at risk, can be effective in communicating information about risks. However, healthcare workers and members of the community have sometimes expressed concerns that giving young people information about VSU could have the unwanted effect of leading to experimentation with these substances.¹⁴ Others argue that information about reducing harm should be provided when it is known that the target group's peers are using volatile substances, targeting those at greatest risk. From time to time a community may experience a cluster of deaths due to VSU⁴¹, which may necessitate a response that includes special education for the community.

Health education for health professionals includes training and information about the management of addiction and substance use. Community pharmacists may be a helpful source of information about the pharmacology of volatile substances.

Note

The National Inhalants Information Service (<http://www.inhalantsinfo.org.au>) provides information about VSU for a range of groups including health workers and communities, and provides assistance with training in VSU management.

What is health education?

Health education as defined by the World Health Organization as “a process comprising of consciously constructed opportunities for learning and communication designed to improve health information, health literacy, health knowledge and developing life skills which are conducive to the promotion of an individual and community's health including that of the environment.”¹⁶⁴

This understanding of the role of education in health is based on the health promotion model set out in the Ottawa Charter 1986, which emphasises the importance of individuals taking control over the determinants of their health to improve their health.¹⁶⁵

9.1.1 Health education messages in VSU management

Messages are tailored to the target group, which can include at-risk groups, individuals who use volatile substances, and their peers, families and communities. The main educational messages in the management of VSU are:

- VSU prevention – educational efforts targeting young people who may be at risk of using volatile substances and giving them information that will help them avoid VSU.
- quitting VSU – education targeting people who use volatile substances to provide them with information about the health effects and risks including problems with employment, social life and police. The main aim is to help them completely stop using volatile substances and remain abstinent.
- harm reduction – education targeting people who use volatile substances to provide them with information about how to reduce risk to themselves and others (Table 9.1)
- how to get help for VSU – education about services available in the local community (e.g. health services, safe places, community programs) and who else can help (e.g. police in some regions are trained in how to help users).

Table 9.1. Key messages to reduce harm due to VSU

<p>Never use volatile substances:</p> <ul style="list-style-type: none"> • in an enclosed space • when you are alone • with a bag over your head so that air can't get in • if you have drunk alcohol or used any other drugs • before you exercise • when you are smoking or near a lit cigarette or fire. <p>Do not spray a substance directly into your mouth.</p> <p>If someone is sniffing, huffing, bagging or chroming:</p> <ul style="list-style-type: none"> • Make sure there is fresh air in the place. Open windows and doors. • Never fall asleep (or let someone else fall asleep) with a bag over their face. • Don't chase them or try to hold them if they are struggling – this could be dangerous for their heart. • Keep other people away from them if they are acting aggressively. • Get help if there is danger to the person or other people – call the police, someone responsible for safety in your community, or an older person who will know what to do. <p>If you are looking after someone who has been sniffing, huffing, bagging or chroming:</p> <ul style="list-style-type: none"> • If you can smell fumes (e.g. from the person or their clothing), let fresh air into the room and keep them away from flames (e.g. lighters, fires). • Make sure someone watches the person for at least six hours to make sure they are recovering. • Call an ambulance or contact local emergency medical services if the person: <ul style="list-style-type: none"> – is getting more anxious or agitated – is acting or talking strangely – has collapsed or 'blacked out' and you cannot wake them – the person is losing consciousness or their thinking is becoming less clear. (You may have to gently wake the person to check.) – has turned an unhealthy-looking colour in their face, fingertips or lips (looks pale, blue or darker than normal), or has cold or sweaty fingers. (Any of these signs could mean their blood is not flowing properly and they are not getting enough oxygen.) – has a seizure (convulsion, fit).
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9.1.2 Harm reduction

Although abstinence is the safest option, some people are unwilling or unable to stop. Harm reduction is a pragmatic, non-judgemental approach that aims to reduce the harmful consequences of substance use for people who intend to continue use. It involves helping people change their behaviour from harmful or risky patterns of substance use towards less risky use (e.g. less frequent use, lower doses, using less harmful substances).¹⁶⁶ Peer education is often used as a strategy within this approach.

9.1.3 Peer education

People often look to their peers as reliable and credible sources of information, particularly about behaviours that are not socially accepted. ‘Insider’ status and knowledge derived from personal experience play an important role in establishing credibility and trust. Peers speak the same language and are more likely to communicate in a non-judgemental manner.

Peer education can be successful in reaching drug users who may not be reached in other ways.^{167,168} Peer education about substance use can involve “education of drug users, about drug users, by drug users, for drug users”.¹⁶⁷ It aims to establish new norms that promote safer behaviour (e.g. abstinence or less risky substance use) within the group.

9.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBR) on the role of education in the management of VSU. One consensus-based recommendation (CBR) was formulated based on expert consensus opinion and practice points (PP) were provided as appropriate.

9.2.1 Universal drug education programs

Recommendation	Type
<p>When providing education about VSU to groups that may include young people with different levels of experience with VSU, the information should be appropriate for the local community and culture. Educators should:</p> <ul style="list-style-type: none"> • focus on VSU that is already occurring in the community • emphasise information about reducing harm • avoid giving young people new ideas about substances that can be inhaled to become intoxicated. 	PP

Universal education is education that targets the whole community (e.g. public health campaigns) or a whole section of the community (e.g. school children). An example of universal education about VSU would be a school drug education program that targets all adolescents, including those with some experience of VSU, those at risk of VSU and those who are unlikely to use inhaled volatile substances. School drug education can be provided within the curriculum or by visiting healthcare workers (e.g. nurses trained in drug and alcohol management). People who provide any education on substance use must consult state/territory authorities, because government policy about substance use education differs between jurisdictions.

In some countries, education about the use of harmful inhaled volatile substances is compulsory. In Australia, authorities in some jurisdictions have been concerned that this information could lead to experimentation with these substances by young people.¹⁴ Some authorities argue that

most school students (those not known to be at risk of VSU) should be taught about the harmful effects of inhaling volatile substances during lessons about occupational health and safety issues, rather than within drug and alcohol education, so that young people learn about toxic effects but are not alerted to the pleasurable effects.¹⁴ Some international research suggests that giving all young people information about VSU, regardless of their experience, can reduce their likelihood of experimentation and reduce the risk of harm.¹⁴ However, there is no strong evidence either for or against universal drug education about VSU.¹⁴

When providing VSU education to young people, a reasonable and cautious approach is to avoid introducing them to new possibilities for inhaled substances by focussing on information about the substances most likely to be used in their peer group, rather than listing all substances that are used recreationally. For example, when educating young people in a community where only petrol sniffing is common, it might be appropriate to avoid mentioning other substances. The message should be chosen according to the context.

Information about the principles of drug education and resources for use in schools are available from The Australian Government Department of Education, Employment and Workplace Relations (<http://www.deewr.gov.au>).¹⁶⁹ State and territory education departments should also be consulted.

9.2.2 Targeted VSU education

Recommendation	Type
Education for users of inhaled volatile substances, those at risk, and their families and peers, provide information about: <ul style="list-style-type: none"> • health effects of volatile substances and strategies for reducing harm • basic first aid for an intoxicated person (e.g. assessing danger to the person and others, letting the person rest in a quiet safe place with fresh air; making sure the person can breathe, when to call emergency services) • how to monitor an intoxicated person during and after recovery (e.g. managing symptoms, what to look for; making sure the person eats and drinks, when to call emergency services) • what to do if there is danger (e.g. contact people in community responsible for safety, such as police and other authorised people) • information about services that can help the person recover (e.g. counselling services, residential rehabilitation facilities, youth and activity programs). 	PP
For families of people who use inhaled volatile substances, their peers and other people of influence, provide or arrange education about VSU.	PP
For all chronic users of inhaled volatile substances, provide or arrange education about the short-term and long-term harmful effects of VSU and the positive health and social benefits of reducing VSU and quitting.	CBR

9.2.2.1 Education targeting users and people at risk of VSU

Education for people who use inhaled volatile substances and those considered to be a significant risk of VSU emphasises strategies for reducing harm, including:

- information about short-term and long-term harmful effects of VSU
- strategies for quitting or at least reducing use
- basic first aid and care for an intoxicated person
- information about reducing harm due to VSU (Table 9.1).

Shock tactics, such as telling young people that they could die while using a volatile substance, may not be an effective way to help them quit and, for some people, the threat of death may actually increase the excitement of VSU.¹⁴ Australian researchers have reported that young people were more likely to be worried about their VSU if they were warned that it may damage their coordination and their ability to play sport.¹⁴ Therefore it may be more effective to focus VSU education on the harmful short-term consequences of continuing to use and the positive benefits of quitting, such as ability to think more clearly and better coordination during physical activity.

Harm reduction needs to be built in to all educational approaches for current volatile substance users. Even when abstinence is the goal, it must be acknowledged that achieving and maintaining abstinence can be a lengthy process, and that lapse and relapse are common. Honest and open discussion about the harms associated with VSU and ways to reduce those harms complements rather than undermines prevention education.

Information about basic first aid (including how to recognise that someone has overdosed and what to do) is also useful for people who use volatile substances, because they are most likely to be there when someone needs medical help.

9.2.2.2 Education targeting peers and families

Many health professionals who work with people involved in VSU advocate for tailored education to be provided to users' families, peer groups and people who influence them. Education for these groups aims to reduce harm and should include information about:

- the health effects of volatile substances
- basic first aid for an intoxicated person (e.g. assessing danger to the person and others, letting the person rest in a quiet safe place with fresh air, making sure the person can breathe, when to call emergency services)
- how to monitor an intoxicated person during and after recovery (e.g. managing symptoms, what to look for, making sure the person eats and drinks, when to call emergency services)
- who to contact if the situation is dangerous (i.e. the people in community who are responsible for safety such as police and other authorised people)
- services that can help the person recover (e.g. counselling services, residential rehabilitation facilities, youth and activity programs).

The key messages about harm reduction in VSU (Table 9.1) should also be included in education aimed at people who may come into contact with users, such as teachers, healthcare workers and council workers.

9.3 Summary of evidence and expert opinion

No randomised controlled clinical trial or case series relevant to the education about VSU were identified.

The committee agreed that specific EBRs for the use of education strategies directed at volatile substance users could not be made due to the lack of evidence and that there is uncertainty among experts in VSU management about the effects of education.

The committee agreed that:

- educating chronic users about the positive benefits of quitting (including recent evidence that brain function may recover after a person ceases VSU²⁸) may help motivate them to quit.
- providing users with basic first aid education may be beneficial, because they may be present when an intoxicated person needs first aid or emergency medical help (e.g. overdose).

Although the clinical questions about VSU education on which literature searches were based were restricted to volatile substance users, the committee also considered the potential benefits of education directed at the families of users. The committee agreed that education for families and peers of users may be beneficial in reducing VSU and harm due to VSU, by informing families about practical actions they can take to manage a person's VSU. Education aimed at families of users might include:

- basic first aid for an intoxicated person
- keeping an intoxicated person safe (e.g. warning against chasing a person who has inhaled volatile substances)
- caring for a person recovering from intoxication due to VSU (e.g. giving them food, water and a quiet place to rest)
- information about services that can help the person recover (e.g. counselling, residential rehabilitation facilities and activity programs).

The committee acknowledged concerns about the potential risk that educating young people about VSU may give them information about which substances they can purchase and how to use them. The committee agreed that educators should exercise caution and judgement, and tailor messages to the experience of the group.

The committee considered that there was insufficient available evidence on which to base recommendations about health education in the management of VSU. Accordingly, practice points (PPs) were developed based on consensus.

10. Psychological therapies

10.1 Psychological therapies for VSU

Psychological therapies for people with substance use problems help a person work towards change – such as quitting or reducing volatile substance use (VSU) – through identifying their problem, offering support and advice and, in some cases, providing guidance. Specialised psychological therapy is undertaken by a certified counsellor, psychologist or psychiatrist. However, some psychological therapies can be provided by other people who have valuable life experience.

Many different forms of psychological therapy are used in the management of substance use. These therapies are based on different theoretical models, but all focus on enhancing a person's psychological wellbeing and supporting change. Most psychological therapies in current use are based on the biopsychosocial model of health and on behaviour change theory (see further reading in Table 10.2).

A range of psychological therapies may be appropriate for an individual. In practice, healthcare workers commonly use elements from more than one type of therapy at the same time. Psychological therapies used in the management of VSU include the following:

- general counselling (person-centred counselling)
- family-inclusive practice
- cognitive-behavioural therapy
- motivational interviewing
- narrative therapy
- storytelling
- yarning^v
- group therapy
- peer mentoring
- therapeutic community.

Psychological therapies should not be used as the sole intervention for a person with VSU problems, but should be offered in conjunction with other interventions.

Note

Patients may be eligible for Medicare Benefits Schedule (MBS) GP Mental Health Care items (information available at <http://www.health.gov.au/internet/main/publishing.nsf/content/pacd-gp-mental-health-care-pdf-descriptors>).

^v In the context of psychological therapies for VSU, yarning refers specifically to a type of therapy based on informal narrative (see 10.2.5 Narrative therapy). In Australian English, the term 'yarning' can refer more generally to chatting or telling stories [Macquarie Dictionary (online edition) MacMillan. Cited March 2011].

Table 10.1. Organisations with expertise in psychological interventions for VSU

Organisation	Contact
Alcohol and other drug services	See list at the end of this guideline
Australian Psychological Society	www.psychology.org.au
The Royal Australian and New Zealand College of Psychiatrists	www.ranzcp.org
Indigenous Psychological Services	www.indigenopsychservices.com.au
Australian Psychological Referral Service	(03) 8662 3300 or 1800 333 497
The Australian Counselling Association	www.theaca.net.au
Psychotherapy and Counselling Federation of Australia	www.pacfa.org.au
The Australian Guidance and Counselling Association	www.agca.com.au

10.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on psychological interventions in the management of VSU. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and a practice point (PP) was provided.

Recommendation	Type
<p>Arrange psychological therapy for all volatile substance users (occasional, regular or chronic users), in conjunction with other treatment.</p> <p>Consider one or more of the following:</p> <ul style="list-style-type: none"> • general counselling (person-centred counselling) • family-inclusive practice • cognitive-behavioural therapy • motivational interviewing • narrative therapy (e.g. storytelling or yarning) • group therapy • peer mentoring • therapeutic community. 	CBR
<p>Healthcare workers who provide psychological therapies in the management of VSU should:</p> <ul style="list-style-type: none"> • have appropriate skills, experience or formal training • receive appropriate clinical supervision and support • use the person's first language (or, if not possible, arrange for an interpreter to be present). 	PP
<p>When providing cognitive-behavioural therapy for a person who has an intellectual impairment, the treatment should be tailored to the individual's capacity (e.g. emphasise the behavioural component of therapy).</p>	CBR

10.2.1 General counselling (person-centred counselling)

Person-centred (Rogerian) counselling is based on a method described in detail by Carl Rogers in the late 1950s and early 1960s.¹⁷⁰⁻¹⁷² It is a non-directive approach to psychotherapy, based on the theory that, through reflecting on their thoughts and feelings, a person is able to understand the causes of their problems and find their own solutions. Within this approach, the counsellor (therapist):¹⁷¹

- creates a safe environment for the person by showing empathy, expressing unconditional positive regard for the person and taking a genuine interest in the person's thoughts and situation
- does not recommend a particular course of action to the person, but instead focuses on assisting the person to take responsibility for themselves and the direction of their lives
- talks about a person's thoughts and feelings in a non-judgemental manner.

Sources of further information on person-centred counselling techniques that may apply to the care of people with VSU include the following:

- Department of Health [UK Government]. *Treatment choice in psychological therapies and counselling. Evidence based clinical practice guideline*. London: Department of Health; 2001.¹⁷³
- Mearns D, Thorne B. *Person-centred counselling in action*. 2nd ed. London: Sage; 1999.¹⁷⁴

10.2.2 Family-inclusive practice

Substance use can have a significant negative impact on families by affecting family relationships and individual family members' emotions and behaviours. Healthcare workers have recognised the benefits of dealing with substance use within the context of the person's family, and the importance of family participation in the person's treatment. However, families have tended to play only a marginal role in standard substance use treatment programs.¹⁷⁵

Getting the person's family involved as early as possible, and for as long as possible, can significantly benefit the recovering user and their family.¹⁷⁶⁻¹⁷⁸ Family-inclusive practice aims to help improve outcomes for people being treated for substance use problems through the active involvement of family members (or significant others).¹⁷⁹

'Family-based therapy' (or family therapy) is different from 'family-inclusive' therapy or practice. Family therapy focuses on the family unit as a whole as the primary focus for treatment, and aims to find a solution to substance use within the family system. Various family-based therapies are well established approaches that are commonly used in mental health care. Family therapy can be used as part of an integrated approach to managing substance use or used independently. It is well supported by research and has been accepted as a safe and viable method to include in the management of substance use, particularly for adolescents.¹⁷⁸ However, some experts have argued that focusing on the family as a whole does not adequately address addictive disease or provide the direct treatment the individual needs.¹⁷⁵

Family-inclusive practice addresses these problems by integrating substance use treatment approaches and family therapy.¹⁷⁶ Family-inclusive practice is increasingly being incorporated into drug treatment services and policy frameworks in Australian states and territories.^{179,180} The components of family-inclusive therapy and level of family engagement vary between service providers and can include:

- family counselling
- provision of information about substance use and its treatment, tailored for families
- referrals to other agencies for information or support
- family therapy
- mediation.

Sources of further information on family-inclusive practice that may apply to the care of people with VSU include the following:

- Galanter M, Brook D. Network therapy for addiction: bringing family and peer support into office practice. *Int J Group Psychother* 2001; 51: 101–122.¹⁸¹
- Kina Families and Addictions Trust. *Family Inclusive Practice in the Addiction Field: A guide for practitioners, working with couples, families and whanau*. Napier: Kina Families and Addictions Trust; 2005.¹⁸²
- Barker P. *Basic family therapy*. 5th ed. Chichester: Wiley-Blackwell; 2007.¹⁸³
- Carr A. *Family therapy: concepts, process and practice*. Revised ed. Chichester: Wiley; 2006.¹⁸⁴
- Goldenberg H, Goldenberg I. *Family therapy: an overview*. Belmont, CA: Cengage Learning, Inc; 2007.¹⁸⁵
- Rivett M, Street E. *Family therapy: 100 key points and techniques*. London: Taylor & Francis, Ltd; 2009.¹⁸⁶
- Network of Alcohol and Drug Agencies. *Tools for change. A new way of working with families and carers*. NADA; 2009.¹⁸⁷
- Eastern Drug and Alcohol Service. *The family focus toolkit. A resource kit for family work in the alcohol and other drug sector*. EDAS; 2010.¹⁸⁸

10.2.3 Cognitive-behavioural therapy (CBT)

Cognitive-behavioural therapy (CBT) is a common form of psychological therapy that is used to treat a wide range of problems, including substance abuse.¹⁸⁹ CBT aims to improve wellbeing through helping people change negative thoughts, feelings and behaviours into positive and healthy thoughts, feelings and behaviours, by teaching people that they have control over these.

CBT is a combination of two therapeutic approaches:¹⁹⁰

- Cognitive therapy focuses on challenging and changing the way a person thinks about issues of concern. One strategy for achieving this is to ask the person for evidence to support their belief. When the person cannot find evidence to support the unhealthy belief they realise the thought is unrealistic. This aids changing their thought patterns to be more positive and realistic.
- Behavioural therapy examines a person's behaviour in particular situations and then aims to teach the person skills and techniques for modifying their behaviour. The CBT model proposes that a person's emotions and behaviours are interlinked and influence each other.

CBT may need to be specifically tailored or adapted for people with intellectual impairment.¹⁹¹

Sources of further information on CBT techniques that may apply to the care of people with VSU include the following:

- Dobson D and Dobson KS. *Evidence-based practice of cognitive-behavioural therapy*. London: Guilford Press; 2009.¹⁹²
- O'Kelly M. *CBT in action: practitioner's toolkit*. Mentone, Victoria: CBT Australia; 2010.¹⁹³
- Bond F, Dryden W, editors. *Handbook of brief cognitive behaviour therapy*. New York: John Wiley & Sons; 2004.¹⁹⁴
- Beck JS. *Cognitive therapy: basics and beyond*. New York: The Guilford Press; 1995.¹⁹⁵
- Blackburn IM, Twaddle V, and associates. *Cognitive therapy in action. A practitioner's casebook*. London: Souvenir Press (Educational and Academic) Ltd; 1996.¹⁹⁶
- Dobson KS, editor. *Handbook of cognitive-behavioral therapies*. 3rd ed. New York: The Guilford Press; 2010.¹⁹⁷

- Freeman A, Pretzer J, Fleming B, Simon K. *Clinical applications of cognitive therapy*. 2nd ed. New York: Kluwer Academic/Plenum Publications; 2004.¹⁹⁸
- Leahy RL. *Cognitive therapy techniques: a practitioner's guide*. New York: The Guilford Press; 2003.¹⁹⁹
- Neenan M, Dryden W. *Cognitive therapy: 100 key points and techniques*. New York: Routledge; 2004.²⁰⁰
- Simos G, editor. *Cognitive behaviour therapy: a guide for the practicing clinician*. New York: Brunner-Routledge; 2002.²⁰¹

10.2.4 Motivational interviewing

Motivation is a strong predictor of whether a substance user will modify their habit or continue unchanged. A person's level of motivation to quit has been associated with improved treatment outcomes, including reduced consumption, higher abstinence rates and positive attitude toward changing substance use.^{202,203} It is common for substance users to be ambivalent about their use and have low motivation toward making positive change, even after seeking help or treatment. Enhancing motivation can help build a person's capacity to change their life.^{178,204}

Motivational interviewing is a non-confrontational, client-centred style of counselling that is used to help a person change a problem behaviour, such as substance use, by building up their ability to motivate themselves. It involves the use of open-ended questions, affirmation, reflective listening, and summarising by the counsellor (Table 10.2). This approach helps the person decide on the outcome they want to achieve (e.g. quitting substance use), identify problems (e.g. how to change their habits), and solve the problems themselves.²⁰⁵

Table 10.2. Principles of motivational interviewing

Motivational interviewing uses four main techniques:²⁰⁵

Empathy – the counsellor expresses an understanding of the problem from the individual's perspective.

Discrepancy – the counsellor helps the individual explore the discrepancy between how they currently live and how they want to live. This helps the individual to become aware of the consequences of their current behaviour and highlights what life could be like if their behaviour changed. Awareness of the discrepancy motivates the individual to explore behaviour-change strategies.

Resistance – the counsellor accepts the individual's resistance to change as a natural part of the process and acknowledges that people are at different stages of readiness to change their behaviour.

Support self-efficacy – the counsellor supports the notion that change is possible and highlights that behaviour change is the person's own responsibility.

This facilitated exchange of information between clinician and client also helps the clinician to assess the individual's readiness to change their behaviour.^{149,178,202} The clinician manages the direction of the interview relevant to the client's stage of change in a manner that supports the client to make positive statements and ideas about managing their substance use.^{205,206} The partnership between clinician and client is important in this therapy.

Motivational interviewing has been clearly demonstrated to be effective in helping people overcome substance use, irrespective of cultural and socioeconomic differences.²⁰⁶⁻²⁰⁸ However, more clinical trials are needed to measure how effective this approach is for VSU.

Motivational interviewing can be delivered in combination with other therapies, including brief intervention for substance use.^{149,206}

Sources of further information on motivational interviewing techniques that may apply to the care of people with VSU include the following:

- Addy D and Ritter A. *Motivational interviewing. Clinical treatment guidelines for alcohol and drug clinicians series no. 2*. Melbourne: Turning Point Alcohol and Drug Centre; 2002.²⁰⁹
- Miller WR and Rollnick S. *Motivational interviewing: preparing people to change addictive behavior*. New York: The Guilford Press; 1991.²¹⁰
- Rollnick S and Miller WR. What is motivational interviewing? *Behavioural and Cognitive Psychotherapy* 1995; 34: 325–224.²¹¹
- Miller WR and Rollnick S. *Motivational interviewing: preparing people for change*. 2nd ed. New York and London: The Guilford Press; 2002.²⁰⁵
- Rollnick S, Miller WR, Butler CC. *Motivational interviewing in health care: helping patients change behaviour*. New York: The Guilford Press; 2008.²¹²
- Headspace (The National Youth Mental Health Foundation). *Evidence summary: the effectiveness of motivational interviewing for young people with substance use and mental health disorders*. Melbourne: Orygen Youth Health Research Centre; 2009.²¹³
- Sim M. Influencing behaviour change in general practice: Part 1 – brief intervention and motivational interviewing. *Aust Fam Physician* 2009; 38: 885–888.²¹⁴
- Henry-Edwards S, Humeniuk R, Ali R, Monteiro M, Poznyak V. *Brief intervention for substance use: a manual for use in primary care*. (draft version 1.1 for field testing). Geneva: World Health Organization; 2003.¹⁴⁹
- *Lifescrpts practice manual: supporting lifestyle risk factor management in general practice*. 2nd ed. Canberra: Commonwealth of Australia; 2010.
- The Lifescript Consortium. *Lifescrpts CD-Rom. Using motivational interviewing and the Lifescrpts resources*. Canberra: Australian Government Department of Health and Ageing; 2005.²¹⁵

10.2.5 Narrative therapy

- Narrative therapy involves gaining insight into a person's understanding of their life and experiences through the use of stories. This approach views people as the experts in their own lives, and involves interactive conversation between the therapist and client.²¹⁶
- Narrative therapy is based on the assumption that people try to make sense of the experiences and events that occur in their lives. In making meaningful conclusions about experiences and events, individuals link the experiences and events across time, which forms the plot of a story. These stories may be about an individual's skills, actions, desires, friendships, work, hobbies, success and failures. Narrative therapy explores how the person forms and links these stories to make meaning, and operates on the premise that these stories have implications for past, present and future behaviour.²¹⁷

10.2.5.1 Yarning (informal talk)

Yarning is a form of narrative therapy that is traditional and culturally appropriate for Aboriginal and Torres Strait Islander people. It is a casual style of conversation that involves exchanging information. Yarning is considered a vital and beneficial component of the treatment process for Aboriginal and Torres Strait Islander people with substance use problems.²¹⁸

10.2.5.2 Storytelling

Storytelling is another form of narrative therapy that is traditional and culturally appropriate for Aboriginal and Torres Strait Islander people. Storytelling is a valuable tool for understanding Aboriginal and Torres Strait Islander people's experiences. The story told may not necessarily be about the person, but may focus on ideas and sharing of knowledge and history.²¹⁸ Storytelling boards are commonly used to facilitate discussion and illustrate points.

Creating a visual story board also helps to convey specific key messages (Table 10.3). For example, the *Sniffing and the brain* flipchart was developed to tell the story of how petrol sniffing can damage a person's brain and health over time, and to emphasise that some people can recover from the effects of petrol sniffing if they can quit.¹⁵²

Table 10.3. VSU story board resources

Petrol Link Up Project. <i>The brain story</i> . Alice Springs, Northern Territory: Alcohol and Drug Resource Education Services; 1994.
Cairney S, Fitz J, Menzies School of Health Research. <i>Sniffing and the brain</i> . [Flipchart] Darwin: Niblock Publishing; 2005. ¹⁵²
Cairney S, Fitz J, Menzies School of Health Research. <i>When boys and men sniff</i> . [Flipchart] Darwin: Niblock Publishing; 2008. ¹⁵³
Cairney S, Fitz J, Menzies School of Health Research. <i>When girls and women sniff</i> . [Flipchart]: Niblock Publishing; 2008. ¹⁵⁴

Sources of information on narrative therapy techniques that may apply to the care of people with VSU include the following:

- Morgan A. *What is narrative therapy? An easy-to-read introduction*. Adelaide: Dulwich Centre; 2000.²¹⁷
- Bacon V. What potential might narrative therapy have to assist Indigenous Australians reduce substance misuse? *Australian Aboriginal Studies* 2007; 1: 71–82.²¹⁶
- Towney LM. The power of healing in the yarn: working with Aboriginal men. *International Journal of Narrative Therapy and Community Work* 2005: 39–43.²¹⁹
- Dudgeon P, Pickett H, Garvey D, editors. *Working with Indigenous Australians: a handbook for psychologists*. Perth: Gunada Press; 2000.²²⁰
- Vicary DA. Counselling as Yarning: Aboriginal insights into Western therapy. *Proceedings of the 38th Australian Psychological Society Annual Conference*. Australia: APS; 2003. p. 242–246.²²¹
- Payne M. *Narrative therapy*. London: Sage Publications Ltd; 2006.²²²
- Angus LE, McLeod J. *The handbook of narrative and psychotherapy: practice, theory, and research*. London: Sage Publications, Ltd; 2004.²²³
- The Dulwich Centre (www.dulwichcentre.com.au).

10.2.6 Group therapy

Group therapy is a form of therapy in which one or more therapists work with a small group of individuals. This approach provides a forum for group members to share experiences and learn from other's experiences in a supportive environment.²²⁴

Various types of psychological interventions (e.g. CBT) can be used in a group environment. However, unlike with individual therapy, the group processes and the interaction amongst the members are thought to be the important mechanisms of behaviour change in this type of therapy.²²⁵⁻²²⁷ Benefits of the group process include the following:

- Group members can assist and motivate each other (e.g. by sharing information about useful services or about stages of recovery).
- Group members can develop their coping, interpersonal and social skills.
- Group members develop a sense of belonging acceptance and validation.
- Group members can develop self-awareness through feedback from other members.

Sources of further information on group therapy techniques that may apply to the care of people with VSU include the following:

- Yalom ID, Leszcz M. *The theory and practice of group psychotherapy*. 5th ed. New York: Basic Books; 2005.²²⁸
- Rutan JS, Stone WN, Shay JJ. *Psychodynamic group psychotherapy*. 4th ed. New York: The Guilford Press; 2007.²²⁹
- Reading B, Weegmann M, editors. *Group psychotherapy and addiction*. London and Philadelphia: Whurr Publishers Ltd; 2004.²³⁰
- Fehr SS. *Introduction to group therapy: a practical guide*. 2nd ed. New York: The Haworth Press; 2003.²³¹
- Bieling PJ, McCabe RE, Antony MM. *Cognitive-behavioral therapy in groups*. New York: Guilford; 2006.²³²
- Free ME. *Cognitive therapy in groups: guidelines and resources for practice*. 2nd ed. Chichester: John Wiley & Sons; 2007.²³³
- White JR, Freeman AS, editors. *Cognitive-behavioral group therapy for specific problems and populations*. Washington: American Psychological Association; 2000.²³⁴

10.2.7 The therapeutic community

The therapeutic community model of care²³⁵ has the following features:^{236, 237}

- It uses self-help and mutual support as the principal means for promoting behavioural change.
- There is a focus on social, psychological and behavioural dimensions of substance use, with the use of the community to heal individuals emotionally, and support the development of behaviours, attitudes and values of healthy living.
- Members participate in the management and operation of the community.

When the therapeutic community model is applied to the treatment of a person with substance use problems, the focus is on motivating positive change in the social, psychological and behavioural factors that are associated with the substance use.²³⁷ The community provides a safe and supportive environment where individuals can gain an understanding of the issues that relate to their substance use, and a number of therapeutic interactions between community members and staff, in order to encourage change and personal development.

Treatment provided within the community is multimodal, ranging from psychotherapy to skills training and daily living skills (e.g. cooking and cleaning) that are aimed at teaching residents to become self-sufficient and to take responsibility for themselves.^{236, 237}

Peer support (support from another person who has experience and knowledge of the behaviour or problem²³⁸) is an important element of the therapeutic community model of treatment. When peer support is part of a person's treatment for substance use, the non-hierarchical and reciprocal relationships that are formed between peers with similar experiences (e.g. VSU) are thought to have a therapeutic effect on an individual's behaviour.^{239, 240}

Within a therapeutic community, the group dynamic between peers, and the influence of the community as a whole, are thought to be the key catalysts for behaviour change.^{236, 237, 241}

Sources of further information on the therapeutic community model that may apply to the care of people with VSU include the following:

- Gowing L, *et al.* *Towards better practice in therapeutic communities*. Bangalow, NSW: Australian Therapeutic Communities Association; 2002.²³⁶
- Bunt GC, *et al.* The therapeutic community: an international perspective. *Subst Abus* 2008; 29: 81–87.

- De Leon G. *The therapeutic community: theory, model and method*. New York: Springer; 2000.²⁴¹
- De Leon G, editor. *Community as method: therapeutic communities for special populations* Westport: Praeger Publishers; 1997.²⁴²
- National Institute on Drug Abuse. *Therapeutic Community. Research Report series*. National Institutes of Health, US Department of Health and Human Services; 2002.²⁴³

10.2.8 General principles

Whichever psychological therapies are used in the care of a person for VSU, the treatment must be tailored to the person's needs and the setting.¹⁷³

Regardless of the treatment approach and the mode of delivery, the therapeutic relationship itself is likely to be the most important factor for effective treatment.²⁴⁴

10.3 Summary of evidence and expert opinion

Two non-randomised case control studies^{245, 246} and six case series^{2, 247-251} relevant to the role of psychological therapies in the management of VSU were identified (Table 10.4).

Table 10.4. Summary of evidence

Evidence summary	Level	References
A non-randomised case control study evaluating treatment for VSU (glue sniffing) observed that aversion therapy in combination with group therapy was more effective than group therapy alone on a range of outcome measures.	III-2	Lowenstein (1982) ²⁴⁵
A small (n=12) non-randomised matched case control study evaluating treatment for chronic VSU in teenagers observed that hypnotherapy in combination with standard counselling was more effective than counselling alone on outcome measures of reduced VSU and self-reported abstinence at 15-week follow-up.	III-2	O'Connor (1982) ²⁴⁶
A case series study evaluating motivational interviewing in the management of substance use in a group of 50 adolescents (by comparing pre- and post-test data) reported that the subgroup of volatile substance users (n=2) achieved self-reported abstinence at follow-up.	IV	Andretta (2008) ²⁴⁷
A case series study evaluating a long-term multifaceted intervention, that included counselling, for teenagers with high-risk substance use reported that almost all had quit VSU at four-year follow-up. Those with baseline VSU pattern of weekly use showed slightly worse outcomes than those with lighter baseline patterns of use (including experimental or monthly use) on a range of outcomes including employment, illegal behaviour and substance use.	IV	Simpson (1992) ²
A case series study that qualitatively evaluated interventions to reduce and prevent VSU (petrol sniffing) in Indigenous communities reported that interventions that included counselling achieved at least short-term benefits.	IV	Bryce (1992) ²⁴⁸
A retrospective case series study of clinical records for VSU management in adolescents, which included counselling, within a child psychiatric out-patient service over a three-year period reported reduction in VSU in approximately 50% of cases. VSU was a symptom of an underlying mental health condition in the majority of children. Psychological treatment techniques and outcomes were not described in detail.	IV	Skuse (1982) ²⁴⁹

...continued

Table 10.4. (continued)

Evidence summary	Level	References
A case series study evaluating the treatment of adolescent boys with conduct disorder in a residential treatment program (by comparing pre- and post-test data), reported that a multifaceted intervention including individual and family counselling achieved benefits in the subgroup with current VSU at baseline (n=7). A history of VSU predicted more severe conduct disorder post treatment.	IV	Sakai (2006) ²⁵⁰
A case series study evaluating counselling for teenagers with VSU (n=35) and their families reported that 74% of cases achieved an improvement in the composite outcome measure of cessation of VSU and improved family function.	IV	Framrose (1982) ²⁵¹

The committee excluded one level III-2 study (Lownstein 1982)²⁴⁵ from its review because it described the treatment technique of aversion therapy, which does not meet current ethical standards.

Overall, the body of evidence supports the use of psychological therapies in the management of VSU. However, the quality of evidence did not enable firm conclusions to be reached. Studies were not comparable due to differences in outcomes reported and insufficiently detailed description of treatment techniques, and several studies reported small samples. Because psychological therapies were generally provided as one element within a multimodal intervention, it was not possible to identify the contribution of the particular technique to the outcomes reported.

The committee considered that there was insufficient available evidence on which to base EBRs about the role of psychological therapies in the management of VSU. Accordingly, CBRs were developed.

The committee agreed that psychological therapies are likely to benefit people with occasional, regular or chronic VSU. Appropriate psychological therapies for VSU include:

- general counselling (person-centred counselling)
- family-inclusive practice
- cognitive-behavioural therapy
- motivational interviewing
- narrative therapy
- storytelling
- yarning
- group therapy
- peer mentoring
- participation in a therapeutic community.

The committee noted that inexperienced or improper use of psychological therapies may cause further harm in a traumatised population such as volatile substance users. Therefore all psychological therapies in this group should be undertaken as part of a structured program and delivered by trained and experienced staff who are appropriately supervised and supported.

The committee agreed that continuity of care should be ensured (e.g. by making sure that an individual is treated by the same member of staff throughout the period of therapy).

The committee agreed that psychological therapies should be provided in the person's first language. When this is not possible, the involvement of a trained health interpreter should be arranged.

The full details of the evidence the committee reviewed on psychological therapies in the management of VSU are provided in Appendix D Tables 8a–c.

11. Activity and youth development programs

11.1 Activity and youth development programs as therapy for VSU

Activity and youth development programs are among the strategies available for helping young people manage and stop their volatile substance use (VSU). These programs focus on getting young people involved in activities that help them develop skills they need in life, including thinking clearly, social skills, work skills and emotional skills (Table 11.1). Youth development programs usually offer a range of structured and semi-structured activities and often involve the young person's family members.

Activity and youth development programs have been introduced in some communities where VSU is prevalent as a way of addressing boredom and a lack of community social facilities, which is seen to be putting young people at risk of adventure-seeking and risk-taking behaviour such as petrol sniffing.²⁵²

The goals of activity and youth development programs are to divert people from VSU and to prevent VSU in those at risk, by providing positive alternatives to risky behaviour. By learning new skills, a young person can attract attention and approval, when in the past they may have been used to attracting attention only for negative reasons. When program activities are relevant and enjoyable, individuals can replace one activity they may enjoy – inhaling volatile substances – for another, healthier enjoyable activity.

Activities provided in youth development programs are often designed to empower the young person by allowing them to develop a sense of worth and a solid sense of self by achieving something they have not done before (e.g. getting a job), and by reconnecting with friends and family. Youth programs have also been effective in encouraging school attendance (e.g. the Yuendumu *Yes School, Yes Pool* policy^{vi}).

For young people at high risk, these programs can provide a point of access to health services, justice services and alcohol and other drug services. However, it may be difficult to attract chronic users to activity and youth development programs.¹⁴

By improving young people's access to support, services and opportunities, these programs can change the culture of substance use in a community over time and therefore make it less likely that younger community members will begin VSU.

Successful programs:

- are often developed in collaboration with the young people they are intended for and their communities
- involve meaningful activities that help people build skills and the capacity to look after themselves properly – not just recreational activities
- provide a nurturing environment
- achieve a strong rapport between program staff and young people (and often with their families too)
- are long-term and sustainable.

Youth development programs are not intended as the sole strategy for managing a person's VSU. These programs should be offered alongside other effective interventions such as medical care and psychological therapies.

vi Established under the Yuendumu 'Swimming Pool' Shared Responsibility Agreement (see <http://www.atns.net.au/agreement.asp?EntityID=3959>)

Table 11.1. Examples of activities included in programs for people affected by VSU

Learning job skills and getting work experience
Training and skills development
Sport and recreation
Cultural activities
Camping
Mentoring
Art and media creation
Leadership

Figure 11.1. Role of youth programs within a holistic VSU management program

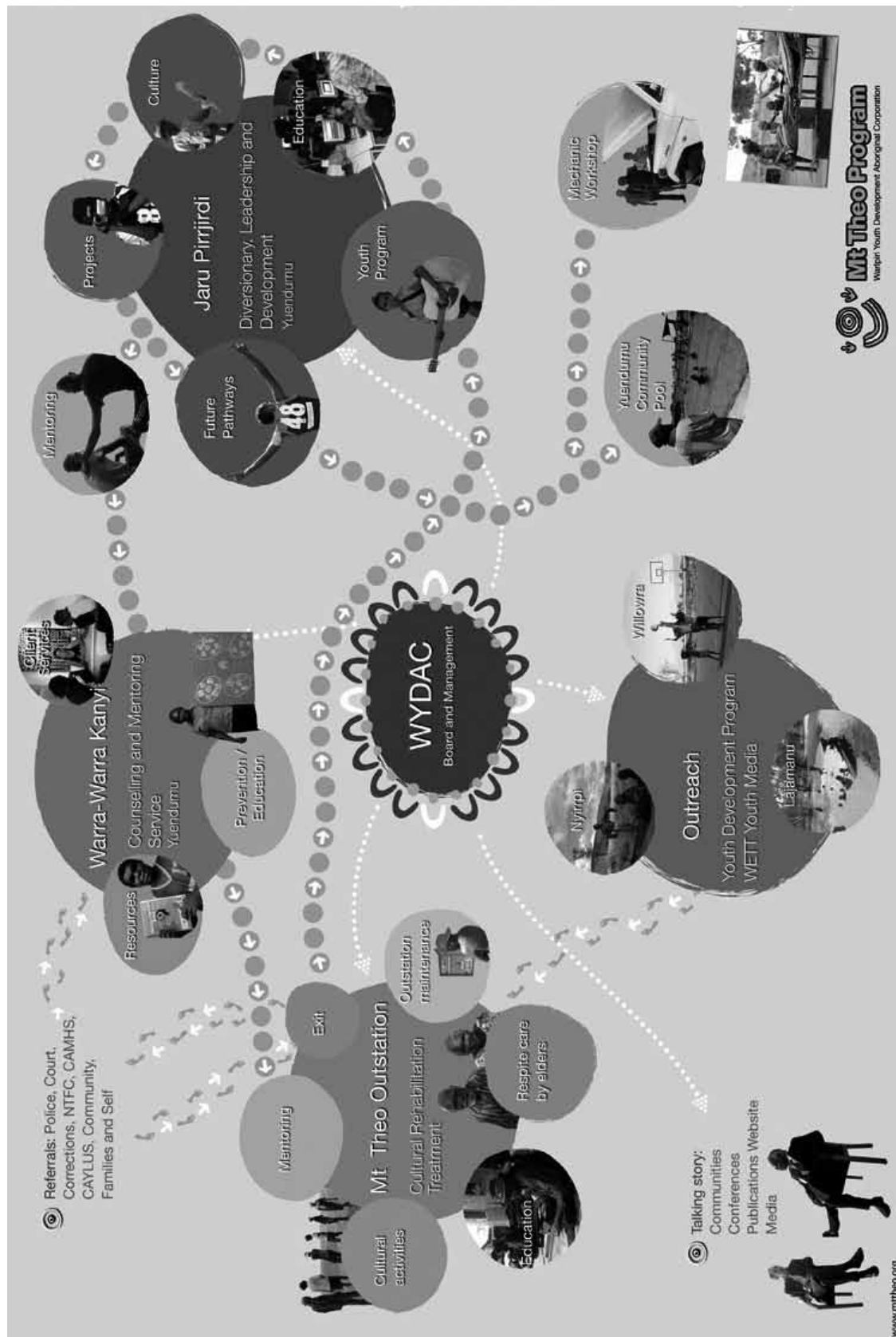


Figure 11.1 shows how youth programs are incorporated into a range of programs offered by the Warlpiri Youth Development Aboriginal Corporation (see also section 14. Aftercare).

11.2 Recommendations

There is sufficient grade IV evidence for the effectiveness of activity and youth development programs in the management of VSU to support an evidence-based recommendation (EBR) for their use in known users. However, there is currently insufficient published and unpublished evidence on which to base other EBRs on the role and application of activity and youth development programs. Practice points (PPs) were formulated using consensus expert opinion.

11.2.1 Role of activity and youth development programs

Recommendation	Type
For all volatile substance users (occasional, regular or chronic users), consider referral to an appropriate activity program/youth development program.	EBR (Grade D) Simpson, 1992 ² Preuss and Brown, 2006 ³ Butt, 2004 ⁴ Cheverton et al, 2003 ⁵ Polson and Chiauuzi, 2003 ⁶ Burns et al, 1995 ⁷ Gostzyla and George, 2003 ⁸
Recommend or arrange participation in activity programs/youth development programs for all community members at risk of VSU, where possible.	PP
Activity programs/youth development programs should be offered alongside other VSU interventions and should not be used as the main approach to VSU management, especially in communities with a high proportion of chronic users.	PP
Make programs available to peers and those at risk, not just people who use volatile substances.	PP

The potential benefits of participation in an activity program/youth development program, and any potential risks due to association with other volatile substance users, should be assessed on an individual basis.

In some remote communities, people have been concerned that if popular activity and youth development programs are only for young people who use volatile substances, then it may be seen as a reward for bad behaviour, and may even encourage VSU so they can participate. For this reason some organisers recommend that programs in these communities should be available to all young people in that community, regardless of their substance use.¹⁴

In urban communities, it may be very difficult for young people who use volatile substances to access generic youth development programs. These people may need purpose-designed specialised programs.

11.2.2 Designing activity and youth development programs

Recommendation	Type
<p>When developing activity programs and youth development programs, consider the following principles:</p> <ul style="list-style-type: none"> • Tailor programs and select appropriate activities to meet specific needs of intended participants such as different age groups, girls, boys, pregnant women, urban communities, rural/remote communities, people with brain damage affecting their thinking. • Offer participants opportunities to learn skills and build capacity for taking control of their lives – not just recreation. • Involve participants' families and community in activities. • Run intensive programs during times when there is more VSU (e.g. during school holidays, on weekends, at night). • Base programs on activities that are practical to run using local resources, so that programs are sustainable long term. • Involve young people and their families in designing and running youth development programs. 	PP

Activities offered within activity and youth development programs should be appropriate for the intended participants' ages, culture and location. Programs should be adapted for groups with special needs, such as pregnant women and people with brain damage.

Activities should not only be educational and recreational, but should aim to give participants useful roles in their community and enable them to achieve something purposeful.²⁵²

In Aboriginal and Torres Strait Islander communities it is particularly important for youth activity programs to include cultural goals beyond the development of new skills.²⁵² Appropriate activities include work and responsibilities associated with traditional ways of life (e.g. building and repairing fences, stockyard work, growing vegetables, gathering bush tucker or hunting). These activities should be led by traditional owners who can pass on cultural knowledge, and should be run in a culturally appropriate setting with the involvement of the community and family.²⁵²

Programs should be run at different times of the day and night, if possible. A program of activities will be less effective if it keeps young people busy throughout the day but has no effect on the VSU that occurs in the evening.

It is important to involve young people (including users and past users, if appropriate) and their families in the design of youth development programs to ensure that the activities will be appealing to target users.

Programs are more likely to be effective if they can be run long term.

11.3 Summary of evidence and expert opinion

Seven case series relevant to activity and youth development programs in the management of VSU were identified (Table 11.2).²⁻⁸

Table 11.2. Summary of evidence

Evidence summary	Level	References
Qualitative evaluation (based on pre-and post-test case series data) of an outstation-based youth program concluded that the activity program was a key element of an effective multifaceted approach to maintaining reduced rates of petrol sniffing in an Australian remote Indigenous community. Participants' initial level of VSU did not predict outcomes.	IV	Preuss (2006) ³
A case series study found that targeted activities were associated with a reduction in VSU during participation. Participants' initial level of VSU did not predict outcomes.	IV	Butt (2004) ⁴
A case series study found that a program of intensive 'exciting/high-risk' supported activities was associated with short-term reduction in substance use (including VSU) by young people. Participants' initial level of VSU did not predict outcomes.	IV	Cheverton (2003) ⁵
Data from a case series suggested that a program of recreation and life-skill activities was a key component of an effective multifaceted approach to managing VSU. Participants' initial level of VSU did not predict outcomes. [Data presented at conference]	IV	Polsen (2003) ⁶
A case series study in an Aboriginal community found that provision of activities, together with reduction in supply, significantly reduced petrol sniffing over an extended period.	IV	Burns (1995) ⁷
A longitudinal case series study evaluating an intervention that involved a combination of counselling and a range of activities (by comparing pre-and post-test data) found that outcomes were correlated with participants' initial level of VSU: outcomes were poorer as baseline VSU increased.	IV	Simpson (1992) ²
Data from a case series suggested that a program of recreational activities can be an effective component of a multifaceted approach to manage regular/chronic VSU. [Data presented at conference]	IV	Gostzyla (2003) ⁸

Overall, the body of evidence indicated that involving people who use volatile substances in activity programs achieved positive effects including reduction and cessation of VSU and a range of psychosocial benefits. In some studies, the benefits were not long lasting. The outcomes reported for high-risk activities may not be generalisable to other activities. Many of the studies reviewed examined multimodal interventions, so the specific contribution of activity and youth development programs on overall outcomes could not be determined.

Due to the low quality of many of the studies, the committee considered the body of evidence in conjunction with expert opinion when formulating recommendations.

The committee agreed that participation in activity and youth development programs has positive benefits for people who use volatile substances occasionally, regularly or chronically. The committee judged that there was sufficient evidence to make a single EBR (grade D) that all volatile substance

users (occasional, regular or chronic) should be referred to an activity program/youth development program, if possible.

The committee considered that the available evidence was insufficient to formulate other EBRs on activity and youth development programs. Accordingly, CBRs were developed. The committee agreed that:

- participation in activity and youth development programs has positive benefits for people who are considered to be at risk of VSU
- activity and youth development programs were most beneficial in the management of VSU when provided in conjunction with other interventions.

The committee noted that boredom is a potential cause of VSU (see section 1.1.1 Prevalence and patterns of VSU in Australia), so youth development programs are a way of addressing this by giving young people something meaningful to do. Engaging in meaningful activities often empowers young people by instilling a sense of achievement and improving their self-esteem.

The committee identified several elements of successful programs and agreed that these should be considered when designing an activity program or youth development program targeting people who use volatile substances or are at risk:

- Characteristics of specific users to be taken into account and activities tailored to their needs. For example, the specific needs of certain age groups, cultural groups, urban versus rural users, pregnant users and cognitively impaired users need to be considered.
- Programs need to be meaningful and should offer more than just sport or recreational activities.
- Young people (including users and former users, if possible) should be involved in the design of youth development programs.
- Activities need to be long-term and sustainable.
- Programs should also involve the families and the community. Community engagement is considered to be a strength of successful youth development programs.

The full details of the evidence the committee reviewed on the use of activity and youth development programs in the management of VSU are provided in Appendix D Tables 9a–c.

12. Residential rehabilitation

12.1 Residential rehabilitation for substance use

Residential rehabilitation services provide an opportunity for people to receive treatment for volatile substance use (VSU) while staying at the facility where they can take time out of their usual routine, improve their health and avoid using volatile substances for a time. Some residential rehabilitation programs are based on the therapeutic community model of care (see 10.7. The therapeutic community).^{235, 236} Residential rehabilitation is usually reserved for chronic users who have already received other treatment.

Although residential rehabilitation programs vary in content and approach, they are typically a live-in facility offering safe and secure accommodation, with an average stay of three months. Most programs have the following main features in common:

- usually located in the community (rather than in a hospital)
- staffed 24 hours per day
- offer a range of therapies (e.g. counselling, peer support, living skills, relapse prevention)
- emphasise a social learning process
- often provide access to activity programs and employment training
- provide case management and tailored individual treatment plans
- involve carers and families and links them with other appropriate services
- coordinate access to other appropriate services (e.g. health and welfare services)
- link to relevant agencies.

Some residential rehabilitation programs (e.g. outstation rehabilitation programs) cater for special populations such as young Aboriginal people in remote settings. Urban residential rehabilitation programs cater for various local populations, and some do not accept volatile substances users. For urban residential rehabilitation services used by Aboriginal and Torres Strait Islander people, effective links between mainstream and Aboriginal and Torres Strait Islander service providers are crucial to the effectiveness of programs.²⁵³

There is currently a need for more family-focussed residential rehabilitation programs designed to cater for women and their children.

Reported rates of abstinence among participants following residential rehabilitation are not high, probably in part due to the fact that these programs cater for people with difficult-to-treat chronic VSU, who often have multiple problems. Relapse among people who use volatile substances is common and does not mean that treatment has been a failure. People often need to make several attempts to quit VSU and each attempt should be encouraged and seen as progress, and each stay at a residential rehabilitation contributes to reducing harm.

Features that contribute to making a residential rehabilitation program beneficial for its clients are summarised in Table 12.1.

Table 12.1. Features of successful residential rehabilitation programs

<p>The facility and its community</p> <p>The place is appropriate for residents' age group.</p> <p>The residence is in a geographically appropriate place for the clients.</p> <p>Staff have appropriate training.</p> <p>Residents have significant factors in common (e.g. the same substance use problem).</p> <p>The facility is connected with the wider community or is based on a therapeutic community model of care.</p> <p>The facility caters for clients' social circumstances (e.g. residences for women are safe and appropriate places for women and children to live).</p> <p>People with personal experience of VSU (e.g. ex-users and carers) are involved in the design of the program.</p> <p>Program content</p> <p>Family members are involved.</p> <p>The program offers purposeful activities (see section 11. Activity and youth development programs).</p> <p>Therapy involves group learning through social interaction.</p> <p>The program provides health education (see section 9. Education).</p> <p>The approach to rehabilitation is culturally appropriate for the clients.</p> <p>The program is socially appropriate for the needs of its target clients (e.g. women or men, younger or older groups)</p> <p>Aftercare is provided to participants after they leave residential care and arranged before they leave.</p>
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12.2 Outstation rehabilitation for VSU

Outstation rehabilitation is a distinctive type of residential rehabilitation primarily designed for Aboriginal young people who use volatile substances.^{vii} These programs have a strong focus on reconnecting people with Aboriginal culture and are located in remote, isolated places (Table 12.2).

The primary aim of outstation rehabilitation is to help the person develop or relearn social skills and to reconnect with culture and land. Because these outstations are a long way from the nearest town or main road, it is difficult for participants to misuse volatile substances or to leave the outstation before completing the program. Families sometimes accompany participants during their stay at a program.

Outstation rehabilitation gives the person a chance to:

- completely stop using volatile substances for a few weeks
- reconnect with family and Aboriginal culture
- think about their behaviour
- spend time on more constructive activities
- improve their health by eating healthier food, resting and getting medical treatment
- get their life in order (e.g. organise employment or use Centrelink services).

^{vii} Occasionally, a non-Indigenous person might be offered participation in an outstation rehabilitation program due to special circumstances (e.g. the young person has grown up in the region and their peers are from the local Indigenous community, or an outstation is the closest available treatment facility.)

Outstation rehabilitation also provides a chance for communities to recover from problems caused by volatile substance use (VSU) while the people who use volatile substances are away.

Proponents of outstation rehabilitation programs report that the drop-out rate during treatment is far lower than in mainstream residential programs, because people are encouraged to become part of the outstation community, and because they cannot leave the outstation without first planning with the staff and community.

Table 12.2. Features of successful outstation rehabilitation programs

<p>Geographic isolation Lowers the likelihood of individuals choosing to leave before completing treatment. Limits access to volatile substances.</p> <p>Cultural connections Participation in Aboriginal culture and being close to country are vital for cultural rehabilitation and healing. Being nearby the individual's own environment and cultural connections helps the person apply what they have learned when they get back home.</p> <p>Training for staff and volunteers</p> <p>Strong support infrastructure</p> <p>Links with other programs and services</p> <p>Clear emergency procedures</p> <p>Access to medical care</p> <p>Safe environment</p> <p>Continuity of care</p> <p>Creates a sense of community</p> <p>Engages with community and families</p> <p>Well-developed program of activities Activities that allow individuals to re-engage with their culture Activities that help individuals develop skills they need for a healthy life back in their home community Activities to keep the person's mind off VSU.</p> <p>Strict inaccessibility of substances</p> <p>Follow-up</p>

12.2.1 Model of therapy

Outstation rehabilitation has similarities to the 'therapeutic community' model of treatment,^{235,236} where treatment is provided within residential settings and focuses on social learning (helping a person adjusting to social norms and improve their social skills by interacting with other people within the community). Within this model, a person's community is seen as the primary influence on their attitudes, perceptions and behaviours associated with VSU. Like the therapeutic community model, the outstation model is based on the assumption that all aspects of life are connected and that a person's overall wellbeing depends on healthy attitudes, healthy living and having a healthy place where they can develop new healthier behaviours.

Teaching provided by elders from the local community is a strong focus of outstation rehabilitation programs and a significant element of rehabilitation. The location of outstation rehabilitation programs can be an important component of therapy. For example, for the Warlpiri people, Mt Theo is a spiritually powerful place of strong Jukurrpa (Dreaming).²⁵⁴

12.2.2 Outstation rehabilitation programs in Australia

In Australia there are currently only two outstation rehabilitation facilities that cater for people who use volatile substances (mainly petrol):

- the Mt Theo outstation, located 160 km northwest of Yuendumu, Northern Territory (www.mttheo.org)
- the Ilpurla outstation, located 220 km southwest of Alice Springs, Northern Territory.

The Mt Theo outstation rehabilitation facility is run by members of the Warlpiri community, primarily for young Warlpiri people. This program has a strong focus on settling down on country, becoming strong in culture and being taught by Warlpiri elders. The Ilpurla outstation rehabilitation facility is run by an Arrernte family and focuses on learning responsibility through work activities and developing the individual's cultural identity. Both use principles of self-help and mutual support.

Both outstations provide residential treatment for people who participate voluntarily and people who have been ordered by a court to undergo mandatory treatment under the *Northern Territory Volatile Substance Abuse Prevention Act, 2005*.²⁵⁵

12.3 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on residential rehabilitation, including outstation rehabilitation, in the management of VSU. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

12.3.1 Mainstream residential rehabilitation

Recommendation	Type
Residential rehabilitation for VSU is recommended for the following groups, after other interventions have been tried: <ul style="list-style-type: none"> • chronic users • regular users who also use other substances (polydrug users) • users who have comorbid mental health conditions • pregnant users, where further use is anticipated. 	CBR
Before being admitted to a residential rehabilitation facility, people who use volatile substances should receive a thorough medical and mental health assessment to identify any conditions that will require specific treatment. If it has not been possible to arrange medical and mental health assessment before admission, these should be arranged as a matter of urgency following admission.	CBR
If possible, the person should be referred to a residential rehabilitation where their first language is spoken by the staff. If this is not possible, access to an interpreter should be arranged as necessary, following admission.	PP

The following considerations should be taken into account when considering residential treatment for a person to help them manage their VSU:

- Whether the person is likely to suit the style of treatment and benefit from it (e.g. is the person likely to stay at the residential treatment facility for long enough to benefit?)
- The characteristics of the other residents (e.g. if VSU is the person's main health problem, are they likely to be at risk of other substance use if in close contact with other residents who have drug and alcohol problems? Is the person most likely to recover by being with people who have similar experiences?)
- The person's pattern and level of VSU. For people with relatively low use of volatile substances, other treatment options should be considered before residential rehabilitation.
- Safety issues (e.g. if the person chooses to leave the facility without first negotiating with staff, will they be safe? In urban settings, people who leave unexpectedly may be difficult to find and may be at risk.)
- The role that residential rehabilitation is expected to play in the person's treatment. Residential rehabilitation should not be used as the sole or main treatment strategy but, rather, it should be provided alongside other treatments such as counselling or participation in a youth development program.

12.3.2 Outstation rehabilitation

Recommendation	Type
Outstation rehabilitation is recommended for all volatile substance users (occasional, regular or chronic) where culturally and socially appropriate, if the person's family agrees.	CBR
Before being admitted to an outstation rehabilitation facility, people who use volatile substances should receive a thorough medical and mental health assessment to identify any conditions that will require specific treatment. If it has not been possible to arrange medical and mental health assessment before admission, these should be arranged as a matter of urgency.	CBR
If possible, the person should be referred to an outstation rehabilitation facility where their first language is spoken by the staff. If this is not possible, access to an interpreter should be arranged.	PP

12.4 Summary of evidence and expert opinion

Six case series relevant to residential rehabilitation for VSU were identified,^{3,80,250,256-258} including one case series³ assessing outstation rehabilitation (Table 12.3).

Table 12.3. Summary of evidence

Evidence summary	Level	References
A pre- and post-treatment case series of adolescent males with conduct disorder, treated in a residential rehabilitation program that included counselling, compared outcomes for subgroups with and without lifetime VSU. Lifetime VSU predicted more severe conduct disorder post-treatment. Follow-up data for seven clients with baseline past-month VSU demonstrated benefits of multimodal interventions in this group.	IV	Sakai (2006) ²⁵⁰
A case series reporting residential rehabilitation outcome data for 2 of 10 VSU treatment centres for indigenous Canadian youth suggested benefits. Baseline pattern of VSU did not predict outcomes. [Reported in annual report]	IV	Youth Solvent Addiction Committee (2006) ²⁵⁶
A case series study assessing a residential rehabilitation program reported pre- and post-test outcome data suggesting benefits. Baseline pattern of VSU did not predict outcomes.	IV	Dell (2005) ⁸⁰
A retrospective case study reported generally poor outcomes among indigenous Canadians aged 7–19 years undergoing residential treatment and aftercare for VSU.	IV	Coleman (2001) ²⁵⁷
A case series study reported poor outcomes for residential treatment and aftercare in 11 adults with chronic VSU, several of whom also had a personality disorder.	IV	Dinwiddie (1987) ²⁵⁸
Qualitative evaluation of the Mt Theo program (based on pre-and post-test case series data) suggested that outstation rehabilitation was a key element of an effective multifaceted approach to reducing petrol sniffing in a remote Indigenous community. Participants' initial level of VSU did not predict outcomes.	IV	Preuss (2006) ³

Overall, the body of evidence relating to the effectiveness of mainstream residential rehabilitation (not including outstation programs) in the management of VSU was inconsistent. Three studies reported benefits, while two studies reported poor outcomes. The populations sampled and the residential rehabilitation approaches studied may not have been comparable across studies.

The committee considered whether the available data enabled factors associated with successful outcomes to be identified. However, the quality of the studies and the details of outcomes reported did not enable conclusions to be made about the effectiveness of residential rehabilitation or its components.

Due to the inconclusive evidence, the committee considered the body of evidence in conjunction with expert opinion when formulating recommendations. The committee agreed on the following:

- Residential rehabilitation can be beneficial for some participants.
- At the least, residential rehabilitation may reduce harm by providing shelter, food and rest, as well as the opportunity to stop using volatile substances during their stay.
- On available evidence, it is not possible to predict which patients will benefit most.

The committee agreed on the following principles:

- The residential stay should be for as long as possible. Dropping out before completion of treatment is a major problem reported in case series.
- To minimise early discontinuation, residential rehabilitation programs should use strategies to encourage long-term participation, such as appropriate cultural content and geographic location.
- Residential rehabilitation may not be appropriate for people who use volatile substances only occasionally or opportunistically, because contact with chronic users may be harmful.
- Residential rehabilitation is likely to benefit those with chronic VSU or users with other mental health or medical conditions, because it provides shelter, food, rest, education, access to other programs and an opportunity to stop using for a time and think more clearly about their behaviour.
- Residential rehabilitation is likely to benefit pregnant women who use volatile substances by keeping them abstinent and reducing harm to the baby.
- People with intellectual disabilities or inability to control impulses may not be able to benefit fully from residential rehabilitation because they may not be able to learn social skills that will help them control their use and behaviour. However, they may still benefit from the care provided by residential rehabilitation.

The study assessing an outstation rehabilitation program demonstrated that this approach can be effective in reducing VSU as part of a multifaceted intervention. However, from the available data it is not possible to identify which components of outstation rehabilitation are necessary for its effectiveness.

The committee considered that there was insufficient available evidence on which to base EBRs about the role of outstation rehabilitation in the management of VSU, and therefore considered the body of evidence in conjunction with expert opinion when formulating CBRs.

The committee agreed on the following:

- Outstation rehabilitation is useful in the treatment of VSU.
- A foundation in Aboriginal culture is vital to the effectiveness of an outstation rehabilitation program. A person is most likely to benefit from outstation rehabilitation when reconnection to their culture is crucial to their recovery.
- Communities may also benefit from the temporary absence of members who use volatile substances.

The committee also considered that, in special circumstances, it may be appropriate for a non-Indigenous person to participate in outstation rehabilitation (e.g. if this is the closest residential rehabilitation facility and the person has an affinity with Aboriginal culture).

The committee considered whether a person with intellectual impairment might benefit from outstation rehabilitation. The committee acknowledged that these people may not benefit as much as others from the social learning environment because they may have less ability to learn social skills. However, the committee agreed that intellectually impaired people might still benefit from the opportunity to stay in a safe place with healthy food, shelter, access to other services they need, and no access to volatile substances during their stay.

The full details of the evidence the committee reviewed on residential rehabilitation for the management of VSU are provided in Appendix D Tables 10a–c (mainstream residential rehabilitation) and Tables 11a–c (outstation rehabilitation).

13. Managing co-existing health conditions

13.1 Comorbidity in people who use volatile substances

People who use volatile substances commonly have other co-existing health conditions that will affect management, including the most appropriate choice of medicines and options for psychological therapies.

13.1.1 Comorbid medical conditions

Detailed guidance on the management of medical conditions in a person with volatile substance use (VSU) is outside the scope of this guideline. Some comorbid conditions are relatively common among subgroups of people who use volatile substances (Table 13.1).

Other less common conditions should be considered where relevant (e.g. increased risk of leukaemia associated with inhalation of benzene or toluene).²⁵⁹

Thorough medical assessment (e.g. by the person's general practitioner) should be arranged for all people receiving treatment for VSU or who make contact with healthcare services during an episode of acute intoxication (see section 6. Comprehensive post-acute assessment).

Table 13.1. Health problems that commonly co-occur with VSU

Neglect
Poor personal hygiene
Malnutrition
Outcomes of high-risk behaviours (e.g. high-risk use of other substances including alcohol, sexually transmitted infections, pregnancy, physical injury)

13.1.2 Comorbid mental illness

Mental health conditions^{viii} are common among people who use volatile substances (Table 13.2). The causal relationship between VSU and other conditions can be complex. For the purposes of this guideline, conditions that may co-occur with VSU (regardless of cause and effect) are listed to ensure that healthcare workers are aware of them and are alert to the possibility that people who use volatile substances may need referral to specialist services:

- VSU is associated with depression.^{49,260-262} People with depression who use volatile substances should be encouraged to reduce or quit VSU to see whether depressive symptoms improve.⁴⁹
- VSU and depression each increase a person's risk of suicide.⁴⁹ VSU has also been associated with increased risk of suicide and suicidal thoughts in several studies,²⁶³⁻²⁶⁵ including one prospective study²⁶⁶, but the causal relationship is not understood.
- Relatively high rates of anxiety disorders are seen among people who use volatile substances.^{267,268} However, the causal relationship is not understood.

viii In this guideline, mental health conditions are defined according to the Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (Text revision). Washington DC: American Psychiatric Association; 2000. [DSM-IV-TR]

- Psychotic symptoms have been reported following VSU, persisting for hours or weeks after acute intoxication.^{269,270} In people with chronic severe psychotic mental illness such as schizophrenia, VSU may interfere with control of symptoms and may trigger an acute episode.²⁷¹
- Personality disorders are common among people who use volatile substances.²⁶⁸ VSU may also contribute to changes in personality as a result of acquired brain damage, either due to direct damage from heavy use or due to head injury while intoxicated. Conduct disorder is also commonly associated with VSU.²⁷²⁻²⁷⁵
- Acquired brain injury and cognitive impairment can occur due to VSU.^{31,35,276,277} Cognitive recovery has been reported after abstinence from petrol sniffing.²⁸

The management of VSU can be challenging in a person with one or more comorbid mental health problems (just as the co-existence of VSU can be challenging when treating a person for mental illness).⁴⁹ The effects of medicines for treating mental health conditions may interact with the effects of VSU, for example:⁴⁹

- Antidepressant medicines may cause more sedation in a person who is also using volatile substances.
- Most antidepressant medicines reduce seizure threshold (VSU also reduces seizure threshold).
- Tricyclic antidepressant medicines and antipsychotic medicines can increase the risk of cardiac arrhythmias due to their effect on the QT interval (VSU can also cause cardiac arrhythmias)
- Antipsychotic medicines may lower the seizure threshold (VSU can also lower seizure threshold).

Table 13.2. Mental health conditions that commonly co-occur with VSU

Depression
Anxiety disorders
Psychotic disorders
Personality disorders
Conduct disorder
Cognitive impairment
Acquired brain injury

Source: References 31, 49, 260-262, 267-270, 272-277

13.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on the management of comorbid health conditions in the management of VSU. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

Recommendation	Type
Arrange a full physical and mental health assessment by the person's general practitioner or other appropriately trained health worker to determine what treatment is needed.	CBR
For people with mental health conditions in addition to VSU, arrange or refer for effective treatment from an appropriately trained health professional.	CBR
(In clinical settings) provide treatment for mental health conditions according to your health service's protocols. If no local protocol applies, follow current national management guidelines for the specific condition or for the management of comorbid substance use and mental illness.	PP
Before prescribing any medicine, assess the potential adverse effects and drug-to-drug interactions by carefully considering the effects of other medical conditions, mental health conditions, other medicines and other substances the person may be using.	PP
When prescribing medicines for pregnant women or children, follow prescribing guidelines.	PP

A list of current national guidelines for managing medical and mental health conditions is available at the National Health and Medical Research Council Clinical Practice Guidelines Portal (www.clinicalguidelines.gov.au). General guidelines that may apply to the care of people with VSU and co-existing medical or mental health conditions include *Comorbidity of mental disorders and substance use: a brief guide for the primary care clinician. National Drug Strategy monograph series no. 71*. Adelaide: Drug and Alcohol Services South Australia; 2008.⁴⁹

When a co-existing mental health problem is suspected in a person attending a non-clinical service, staff should arrange prompt referral for medical and psychiatric assessment. Before the person can be referred, staff should provide basic care according to local protocols or follow national first aid guidelines such as the following:

- Aboriginal Mental Health First Aid Training and Research Program. *Depression: guidelines for providing mental health first aid to an Aboriginal or Torres Strait Islander Person*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne and beyondblue, the national depression initiative; 2008.⁵⁰
- Mental Health First Aid Training and Research Program. *Depression: first aid guidelines*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne; 2008.⁵¹
- Aboriginal Mental Health First Aid Training and Research Program. *Psychosis: guidelines for providing mental health first aid to an Aboriginal or Torres Strait Islander person*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne and beyondblue, the national depression initiative; 2008.⁵²
- Mental Health First Aid Training and Research Program. *Psychosis: first aid guidelines*. Melbourne: Orygen Youth Health Research Centre, University of Melbourne; 2008.⁵³

13.3 Summary of evidence and expert opinion

One randomised controlled clinical trial and one case series relevant to the management of comorbid mental health conditions were identified (Table 13.3).^{250, 278}

Table 13.3. Summary of evidence

Evidence summary	Level	References
A randomised controlled trial comparing carbamazepine with haloperidol in the treatment of inhalant-induced psychotic disorder observed significant reductions in symptom severity from baseline in both treatment groups (48.3% versus 52.7% on Brief Psychiatric Rating Scale). Adverse effects were significantly more frequent and severe in the haloperidol group than the carbamazepine group, including a significantly higher mean DiMascio Extrapyramidal Symptoms Scale score. Nine patients terminated treatment because of adverse effects (five on carbamazepine; four on haloperidol).	II	Hernandez-Avila (1998) ²⁷⁸
A case series described the treatment of adolescent boys with serious substance use (including VSU) and behaviour problems within a holistic residential treatment program, which included unspecified psychiatric medicines as indicated.	IV	Sakai (2006) ²⁵⁰

The committee noted that neither haloperidol nor carbamazepine should be used as first-choice agents to manage psychotic symptoms in people who use volatile substances. The committee noted that haloperidol may cause significant extrapyramidal adverse effects, including acute dystonia, particularly if doses exceed 3–4 mg in a patient who has not previously been exposed to antipsychotic drugs.⁸⁹ The committee noted that carbamazepine is rarely used in the management of acute behavioural disturbances due to its adverse effects including central nervous system effects, gastrointestinal effects and leukopaenia.

The committee considered that people with a mental illness or intellectual impairment co-existing with VSU are unlikely to adhere to a treatment plan that involves self-administered oral medicines. Depot injections may be considered in this group.

The committee considered that there was insufficient available evidence on which to base specific EBRs about the management of comorbid mental health conditions in people who use volatile substances, but that healthcare workers should follow relevant mental illness management guidelines. Accordingly, CBRs were developed.

The committee agreed on the following:

- An adequate psychiatric assessment should be undertaken before any medications are prescribed for the treatment of comorbidity in volatile substance users.
- When a comorbid condition is suspected in a person who uses volatile substances or the person presents with acute intoxication, referral for medical and psychiatric assessment should be arranged within 24 hours. Medical assessment should be completed within 36 hours and psychiatric assessment within 72 hours.
- When medicines are required for the treatment of comorbid conditions, prescribers should assess the full range of potential adverse effects and drug-to-drug interactions by carefully considering the effects of other medical conditions, other medicines and other substances the person may be using.
- When managing comorbid conditions in patients with VSU problems within hospitals, local medication protocols should be followed, including protocols for rapid tranquillisation (as needed during acute behavioural disturbances considered to be psychiatric emergencies).

The full details of the evidence the committee reviewed on the management of comorbid health conditions are provided in Appendix D Tables 12a–c.

14. Aftercare

14.1 Aftercare in VSU management

Aftercare refers to all aspects of care provided after the person leaves an acute care facility or residential rehabilitation program where they have received treatment for volatile substance use (VSU). The aim of aftercare is to help the person return to their home environment and to prevent or reduce risk of relapse or repeated high-risk VSU incidents.

People who use volatile substances experience significant disadvantage and need continued assessment and care during their recovery. After treatment for substance use, people will still face situations that make them want to start using again (e.g. stressful situations or contact with friends who are still using volatile substances). Structured long-term aftercare, ideally provided by the same staff over time, is important to support the person and help them gain the skills they will need to avoid returning to VSU or other substance use, including high-risk alcohol use. Services for people recovering from VSU often have an ‘open-door’ policy, where people can come back if they feel they are in danger of relapse or have relapsed.

Aftercare may involve activities such as ongoing counselling (e.g. through a hospital outpatient department or community-based provider), skills training, job readiness training, community services, being matched up with a buddy or attending a support group. Aftercare should involve continuing monitoring, assessment, counselling and support for the person and their family. Aftercare can be structured as a series of stages or levels that a person can move through during recovery and beyond. For example, the Mt Theo aftercare system, which a person enters after they have completed residential treatment at the Mt Theo outstation rehabilitation facility, is a progressive model in which people move up and down between levels (Table 14.1).

Many individuals are lost to follow-up during this stage of care, so it is vital for agencies to have a coordinated approach. Case management can be used during aftercare, although it normally begins immediately after the person makes contact with services during an episode of acute intoxication or during a crisis.

As with other behavioural interventions, the quality of the treatment and the therapeutic relationship between the care provider and the client is the most powerful predictor of success.

Table 14.1. Case study: the Mt Theo approach to aftercare

Level	Description
Level One	<p>Trainee volunteer</p> <p>The person becomes one of approximately 100 trainee volunteers, who assist with the running of youth program activities and are supported by Mt Theo staff. This provides the trainee volunteer with meaningful activity and responsibility.</p> <p>The person can participate in the ‘Jarú Nightclub’ for 16- to 25-year olds, which encourages people to re-engage with their education within an informal environment for productive and enjoyable practical learning. It provides young adults with an opportunity to re-access education and participate in alternative positive activities during the evening (e.g. story writing, mathematics, paintings, printmaking, reading, computers, cooking, music). It also supports participants to complete certificates in a range of subjects.</p>

...continued

Table 14.1. (continued)

Level	Description
Level Two	<p>Project participation</p> <p>This level focuses on culture and projects. Young people are taught important cultural elements by community elders and other members of the community. It can involve bush trips, training through other local initiatives such as the Warlpiri Rangers, or participation in projects that align with the person's interests and aspirations (e.g. media projects, dance workshops, mechanics workshops, law and land management).</p>
Level Three	<p>Graduate</p> <p>The person can mentor other people within their community who are at risk for VSU, by participating in the Warra Warra Kanyi Counselling and Mentoring Service – a community-based youth counselling and mentoring service aimed at helping young Warlpiri with issues they face.</p> <p>The person can participate in the Pathways employment program and receive support to look for work, or support their community in other ways.</p>

Source: References 279, 280

14.2 Recommendations

There is currently insufficient published and unpublished evidence on which to base evidence-based recommendations (EBRs) on aftercare. Consensus-based recommendations (CBRs) were formulated based on expert consensus opinion and practice points (PPs) were provided as appropriate.

Recommendation	Type
Provide aftercare for all volatile substance users (occasional, regular or chronic).	CBR
Acute and residential services should incorporate aftercare plans in their discharge planning processes.	PP
<p>When several agencies/services are involved in providing aftercare for a person, there must be a negotiated point of responsibility. It is recommended that:</p> <ul style="list-style-type: none"> • one agency is assigned responsibility for coordinating referrals and follow-up • one person, from the agency assigned responsibility for coordinating referrals, should be nominated as the individual's contact. <p>Services/agencies that provide aftercare should set up systems for clear communication with each other (including sharing of information, if the person has given their consent for their personal information to be shared between providers).</p>	PP
Aftercare for young people recovering from VSU should include referral to an activity or youth development program (see section 11. Activity and youth development programs).	CBR
<p>For pregnant women recovering from VSU, aftercare should involve:</p> <ul style="list-style-type: none"> • strong encouragement to stay in contact with antenatal services for care throughout the pregnancy • referral to appropriate maternity care services, including referral to an obstetrician for high-risk pregnancy assessment and postnatal care. 	CBR

14.3 Summary of evidence and expert opinion

Two case series relevant to aftercare for VSU were identified (Table 14.2).^{257,258}

Table 14.2. Summary of evidence

Evidence summary	Level	References
A retrospective case series study reported generally poor outcomes of aftercare following residential rehabilitation for VSU for indigenous Canadian young people aged 7–19 years.	IV	Coleman (2001) ²⁵⁷
A retrospective case series study reported generally poor outcomes of aftercare after treatment for chronic VSU in people aged 19–32 years.	IV	Dinwiddie (1987) ²⁵⁸

Both studies indicated that aftercare for chronic volatile substance users was associated with poor outcomes. The findings were difficult to interpret because both studies involved multimodal interventions and were of low quality.

The committee considered that there was insufficient available evidence on which to base EBRs about aftercare for VSU. Accordingly, CBRs were developed.

The committee noted that aftercare is critical to long-term outcomes, given high reported rates of relapse after structured programs including residential rehabilitation.

The committee agreed on the following:

- Services caring for people with VSU problems should incorporate continuing aftercare plans into discharge policies and procedures.
- Aftercare for VSU should use a case management approach involving ongoing surveillance and follow-up.
- Aftercare for young people should include referral to youth development programs that include activities focused on education, vocation and empowerment.
- Due to the complex needs of this population, it is vital for case conferencing to occur between all the multiple agencies involved. When several agencies/services are involved in the provision of care there must be a negotiated point of responsibility. The committee agreed that the referring agency (the service that made first contact with the person or referred them to residential care) should be responsible for coordinating referrals and follow-up, with one person nominated as the individual's contact. This will require clear communication between agencies. The committee noted that aftercare may be more difficult in urban settings because it is harder to find the individual.
- For pregnant women recovering from VSU, every effort should be made to encourage them to stay in contact with antenatal care throughout pregnancy. Referral to specialist obstetric services for high-risk pregnancy assessment and care should be arranged.
- One staff member from the agreed agency should be assigned responsibility for the coordination of referrals to a range of services.

The full details of the evidence the committee reviewed on aftercare are provided in Appendix D Tables 13a–c.

15. Future research

15.1 VSU research

The development of this guideline has highlighted the paucity of research studies on the assessment and care of people who use volatile substances and the management of volatile substance use (VSU). The committee acknowledges that research in this area is challenging, given the relatively small number of volatile substance users and difficulties in following up clients after treatment.

The committee recommends that key areas for future research include a strong focus on the use of robust study designs and methods. Many of the studies reviewed by the committee were not rigorous enough in methodological design or did not report information about participants and results in sufficient detail for meaningful conclusions to be drawn about the findings. As a result, many of the studies reviewed could not be used to formulate recommendations. In particular, robust research is much needed in the area of education and early and brief intervention.

15.2 Recommendations

To build the body of evidence in this area, future research needs to focus on developing robust study design and methods. In particular the following areas should be of primary concern.

15.2.1 Program evaluation versus client outcome studies

A substantial proportion of studies reviewed by the committee included evaluation studies that had been completed for funding evaluation purposes. Program evaluation completed for funding purposes often use methodologies different from those appropriate to clinical outcome studies (e.g. retrospective design). Accordingly, these studies did not measure and report the type of data required to formulate clinical practice recommendations.

For program evaluation studies to be useful in informing clinical practice, a robust prospective evaluation methodology needs to be incorporated during the design stage of the funded program.

15.2.2 Multimodal interventions

It is often difficult to determine causal factors in studies evaluating multimodal interventions. Future research should take this into account and ensure that the study design is able to differentiate between the relative effects of different treatments.

15.2.3 Subgroups

Research is needed to identify characteristics of subgroups who will benefit most from specific therapies, including the most effective treatment for occasional, regular and chronic users.

There is also a need for research to develop and validate appropriate tools for mental health assessments in children and adolescents who use inhaled volatile substances.

15.2.4 Multisite studies

Future research should focus on developing multisite studies, as they allow for the collection of larger and more diverse sample sizes. Large studies would provide sufficient statistical power to detect significant relationships, enabling stronger conclusions to be drawn from the findings. More diverse samples would allow greater generalisability of results.

15.2.5 Longitudinal studies

To ascertain the long-term benefits of particular interventions, longitudinal studies in this area are warranted. These should include studies examining the long-term benefits of brief intervention, education and residential rehabilitation treatment.

15.2.6 Standardised tools

Future research in the area of interventions for VSU should use standardised and validated tools for assessing VSU and measuring outcomes of interventions, to allow for the findings of studies to be more readily compared and incorporated into meta-analysis if required.

15.2.7 Studies comparing residential care with aftercare

As residential care is costly and time intensive, it is recommended that future research identify precisely which positive outcomes residential care and aftercare can have for volatile substance users. This would require well-designed longitudinal studies.

15.2.8 Community engagement and involvement

Throughout the guideline, the importance of community involvement in the treatment of VSU is noted. Research that would enable a greater understanding of the key elements of community engagement that support successful management of VSU, including models of engagement and cultural continuity for Aboriginal and Torres Strait Islander peoples, would be valuable.

16. Clinical questions

The clinical questions addressed within this guideline are listed below. These were generated at the first VSU Guideline Development Committee Meeting on 17 November 2009.

1. Acute intoxication

- 1.1 For *acute behavioural disturbance* in the context of VSU, what elements of emergency care are associated with improved morbidity and mortality outcomes?
- 1.2 For *acute behavioural disturbance* in the context of VSU, which medications improve morbidity and mortality outcomes/admission to acute psychiatric care?
- 1.3 For *acute behavioural disturbance* in the context of VSU, does safe containment and monitoring improve morbidity and mortality outcomes?

2. Managing withdrawal symptoms

- 2.1 What elements of medically managed withdrawal are required for chronic or acutely affected volatile substance users?

3. Comprehensive post-acute assessment

- 3.1 For *occasional VSU*, what elements of assessment are associated with development of effective care plans?
- 3.2 For *opportunistic and/or polydrug VSU*, what elements of assessment are associated with the development of effective care plans?
- 3.3 For *chronic VSU*, what elements of assessment are associated with the development of effective care plans?
- 3.4 For *pregnant* volatile substance users, what elements of assessment are associated with the development of effective care plans?
- 3.5 For volatile substance users with *comorbid conditions*, what elements of assessment are associated with the development of effective care plans?
- 3.6 For volatile substance users who are *intellectually and impulse compromised*, what elements of assessment are associated with the development of effective care plans?
- 3.7 For volatile substance users with *acute behavioural disturbance*, what elements of assessment are associated with the development of effective care plans?
- 3.8 What assessment procedures are required to identify levels of risk for VSU?

4. Brief intervention

- 4.1 For *occasional* VSU, is brief or early intervention associated with reduced VSU or harm?
- 4.2 For *opportunistic and/or polydrug* VSU, is brief or early intervention associated with reduced VSU or harm?
- 4.3 For *chronic* VSU, is brief or early intervention associated with reduced VSU or harm?
- 4.4 For *pregnant* volatile substance users, is brief or early intervention associated with reduced VSU or harm?
- 4.5 For volatile substance users with *comorbid conditions*, is brief or early intervention associated with reduced VSU or harm?
- 4.6 For volatile substance users who are *intellectually and impulse compromised*, is brief or early intervention associated with reduced VSU or harm?

5. Case management

- 5.1 For *occasional* VSU, is case management associated with improved outcomes?
- 5.2 For *opportunistic and/or polydrug* VSU, is case management associated with improved outcomes?
- 5.3 For *chronic* VSU, is case management associated with improved outcomes?
- 5.4 For *pregnant* volatile substance users, is case management associated with improved outcomes?
- 5.5 For volatile substance users with *comorbid conditions*, is case management associated with improved outcomes?
- 5.6 For volatile substances who are *intellectually and impulse compromised*, is case management associated with improved outcomes?

6. Education

- 6.1 For *occasional* VSU, is education on the effects of VSU associated with either reduction in VSU or harm reduction?
- 6.2 For *opportunistic and/or polydrug* VSU, is education on the effects of VSU associated with either reduction in VSU or harm reduction?
- 6.3 For *chronic* VSU, is education on the effects of VSU associated with either reduction in VSU or harm reduction?
- 6.4 For *pregnant* volatile substance users, is education on the effects of VSU associated with either reduction in VSU or harm reduction?
- 6.5 For volatile substance users with *comorbid conditions*, is education on the effects of VSU associated with either reduction in VSU or harm reduction?
- 6.6 For volatile substance users who are *intellectually and impulse compromised*, is education on the effects of VSU associated with either reduction in VSU or harm reduction?

7. Clinicocultural interventions

- 7.1 What clinicocultural interventions are associated with changed outcomes for *occasional* VSU?
- 7.2 What clinicocultural interventions are associated with changed outcomes for *opportunistic and/or polydrug* VSU?
- 7.3 What clinicocultural interventions are associated with changed outcomes for *chronic* VSU?
- 7.4 What clinicocultural interventions are associated with changed outcomes for *pregnant* volatile substance users?
- 7.5 What clinicocultural interventions are associated with changed outcomes for *people with acute behavioural disturbance* as a result of VSU?
- 7.6 What clinicocultural interventions are associated with changed outcomes for volatile substance users *with comorbid conditions*?
- 7.7 What clinicocultural interventions are associated with changed outcomes for volatile substance users who are *intellectually and impulse compromised*?

8. Psychological Interventions

- 8.1 For *occasional* VSU, are any counselling modalities (narrative therapy, family therapy, cognitive-behavioural therapy [CBT], group therapy) associated with changed outcomes?
- 8.2 For *opportunistic and/or polydrug* VSU, are any counselling modalities (narrative therapy, family therapy, CBT, group therapy), associated with changed outcomes?
- 8.3 For *chronic* or mature VSU, are any counselling modalities (narrative therapy, family therapy, CBT, group therapy) associated with changed outcomes?
- 8.4 For *pregnant* volatile substance users, are any counselling modalities (narrative therapy, family therapy, CBT, group therapy) associated with changed outcomes?
- 8.5 For volatile substance users with *comorbid conditions*, are any counselling modalities (narrative therapy, family therapy, CBT, group therapy) associated with changed outcomes?
- 8.6 For volatile substance users who are *intellectually and impulse compromised*, are any counselling modalities (narrative therapy, family therapy, CBT, group therapy) associated with changed outcomes?

9. Activity and youth development programs

- 9.1 For *occasional* VSU, what elements of activity and engagement programs are associated with changed outcomes?
- 9.2 For *opportunistic and/or polydrug* VSU, what elements of activity and engagement programs are associated with changed outcomes?
- 9.3 For *chronic* VSU, what elements of activity and engagement programs are associated with changed outcomes?
- 9.4 For *pregnant* volatile substance users, what elements of activity and engagement programs are associated with changed outcomes?
- 9.5 For volatile substance users with *comorbid conditions*, what elements of activity and engagement programs are associated with changed outcomes?
- 9.6 For volatile substance users who are *intellectually and impulse compromised*, what elements of activity and engagement programs are associated with changed outcomes?

10. Residential rehabilitation

- 10.1 For *opportunistic and/or polydrug* VSU, are residential rehabilitation programs associated with changed outcomes?
- 10.2 For *chronic* VSU, are residential rehabilitation programs associated with changed outcomes?
- 10.3 For *pregnant* volatile substance users, are residential rehabilitation programs associated with changed outcomes?
- 10.4 For volatile substance users with *comorbid conditions*, are residential rehabilitation programs associated with changed outcomes?
- 10.5 For volatile substance users who are *intellectually and impulse compromised*, are residential rehabilitation programs associated with changed outcomes?

11. Outstation rehabilitation

- 11.1 For *occasional* VSU, what features of outstation rehabilitation are associated with changed outcomes?
- 11.2 For *opportunistic and/or polydrug* VSU, what features of outstation rehabilitation are associated with changed outcomes?
- 11.3 For *chronic* VSU, what features of outstation rehabilitation are associated with changed outcomes?
- 11.4 For *pregnant* volatile substance users, what features of outstation rehabilitation are associated with changed outcomes?
- 11.5 For volatile substance users with *comorbid conditions*, what features of outstation rehabilitation are associated with changed outcomes?
- 11.6 For volatile substance users who are *intellectually and impulse compromised*, what features of outstation rehabilitation are associated with changed outcomes?

12. Managing co-existing health conditions

- 12.1 For volatile substance users with *comorbid conditions*, are anti-depressive or anti-psychotic medications associated with changed outcomes?

13. Aftercare

- 13.1 For *opportunistic and/or polydrug* VSU, are any forms of aftercare associated with changed outcomes?
- 13.2 For *chronic* VSU, are any forms of aftercare associated with changed outcomes?
- 13.3 For *pregnant* volatile substance users, are any forms of aftercare associated with changed outcomes?
- 13.4 For volatile substance users with *co-morbid conditions*, are any forms of aftercare associated with changed outcomes?
- 13.5 For volatile substance users who are *intellectually and impulse compromised*, are any forms of aftercare associated with changed outcomes?

Useful contacts

Alcohol and other drug services

ACT	(02) 6207 9977
NSW	(02) 9361 8000 (Sydney) 1800 422 599 (NSW)
NT	1800 131 350
QLD	1800 177 833
SA	1300 131 340
TAS	1800 811 994
VIC	1300 85 85 84 (information) 1800 888 236 (counselling)
WA	(08) 9442 5000 (Perth) 1800 198 024 (WA)

National Inhalants Information Service

02 6215 9816

info@inhalantsinfo.org.au

<http://www.inhalantsinfo.org.au>

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