Amphetamine Intoxication & Withdrawal – Management Guidelines for Acute Hospital Settings

2014 Australian Drugs Conference
*Ice & Altered Realities*

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Nexus Dual Diagnosis Service
For a copy of the latest version of the Guidelines for the Management of Acute Behavioural Disturbance due to Amphetamine-type Stimulant Intoxication please email: nexusdd@svha.org.au

Comments and suggestions are welcome, and can also be sent to the above address.

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Victorian Dual Diagnosis Services
Metropolitan Melbourne

Stakeholders
- Area Mental Health Services
- AOD Services
- Mental Health Community Support Services

www.dualdiagnosis.org.au
Outline

• Context
• Psychopharmacology
• Epidemiology
• Clinical effects
• Comorbidity
• Management of acute arousal
• Management of post-acute phase
The ice in their veins

August 30, 2013

Richard Baker and Nick McKenzie

Use of methamphetamine, or ice, has reached crisis point in Victoria, especially in regional and Aboriginal communities which are paying the price of addiction.

One in three mental health workers attacked: report

August 8, 2014

Growing demand for mental health services, cuts to services, inadequate staffing levels, poor training and a growing number of ice-affected patients had created unsafe conditions, he said.

Mr Williams said mentally ill patients with behavioural disturbances needed to be helped with one-on-one support and "de-escalation techniques".

Classification of Substances

**CNS Depressants / “Downers”**
- Alcohol
- Benzodiazepines
- Cannabis, synthetic cannabinoids
- Opioids
- Antipsychotics (quetiapine, olanzapine)

**CNS Stimulants / “Uppers”**
- Amphetamine-Type Stimulants (‘Speed’, ‘Ice’, Dexamphetamine, Methylphenidate; MDMA)
- Cocaine
- Mephedrone, methylone, MDPV, 25I-NBOMe (EPS/‘Bath salts’)
- Khat; caffeine

**Hallucinogens / “Twisters”, “Benders”**
- MDMA
- LSD
- Ketamine

N.B.:
- Mixed effects (triangle)
- Polydrug use common: within and across categories
- Synergistic effects in combination within categories

Triangle of Drugs
[from Queensland Health Dual Diagnosis Guidelines]
Forms of Amphetamine-Type Stimulants

Amphetamine-Type Stimulants / Psychostimulants
1. Methylenedioxymethamphetamine (MDMA), ‘ecstasy’
2. Cocaine
3. Amphetamine sulphate or hydrochloride, ‘speed’
4. Methamphetamine
   a. crystal methamphetamine, ‘ice’, ‘crystal meth’
   b. methamphetamine tablets, ‘pills’
   c. methamphetamine ‘base’ - a moist, oily substance
   d. methamphetamine powder
5. Paramethoxyamphetamine (PMA)
6. Paramethoxymethamphetamine (PMMA)
Mode of action

• Inhibits monoamine transporter function (DAT & VMAT-2)
• Major action is on dopamine in the reward and executive function (mesocorticolimbic) pathways
• **Dopamine** – mood effects, high arousal, craving
• **Noradrenaline** – arousal, cardiovascular side effects
• **Serotonin** – mood effects
AOD Usage

Poly Drug Use - Timeline

- Alcohol, cigarettes: 12-14
- Cannabis: 14-16
- Stimulants: 16
- Opioids: 20

Types of Use
- Experimental - adolescents and young people trying out of curiosity.
- Instrumental - truck drivers, construction industry, etc.; students, athletes
- Recreational - e.g., at private parties, clubs or dance parties; gay subculture
- Binge - moderate to high doses in an on–off pattern.
- Regular - weekly, several times weekly or daily use. Higher risk of dependence and mental health problems.

1. Victorian Youth Alcohol & Drug Survey 2009
2. Treatment approaches for users of methamphetamine - a practical guide for frontline workers.
Short-term effects

- Euphoria, alertness, increased confidence and wakefulness
- Sweating, tremors, teeth grinding
- Anxiety or panic
- Agitation, irritability, aggression
- Paranoia and hallucinations (drug-induced psychosis)
Long-term effects

- Depression, anxiety, psychosis, chronic sleep disturbance
- Neurocognitive deficits:
  -prefrontal cortex (*working memory*)
  -anterior cingulate (*selective attention*)
  -temporal lobe (*episodic memory, depression*)
  -differences in brain structure and function between male and female stimulant users

- Weight loss, dehydration, poor appetite or malnutrition
- Hypertension, renal failure
- Poor dentition, skin picking
Comorbidity of Stimulant-related disorders (DSM-5)

Co-occurrence with other substance use disorders:
• especially those involving CNS depressants (esp. cannabis), which are often taken to reduce insomnia, nervousness, and other unpleasant side effects;

Co-occurrence with other mental disorders (dual diagnosis)
• Posttraumatic stress disorder
• Antisocial personality disorder [Narcissistic personality traits/vulnerability]
• Attention-deficit/Hyperactivity disorder
• Gambling disorder

• Amphetamine-induced disorders in DSM-5:
GUIDELINES FOR THE ACUTE ASSESSMENT AND MANAGEMENT OF AMPHETAMINE-TYPE STIMULANT INTOXICATION AND TOXICITY

**Intoxication**

**Important questions:**
1. In the last 24-48hrs, have you used:
   - amphetamines or methamphetamines?
   - other stimulants (e.g., high dose caffeine, cocaine, MDMA, new synthetic stimulants, prescription stimulants)?
   - other substances (e.g., EtOH, GHB, THC, synthetic cannabis, opioids, hallucinogens, solvents, OTC)?
   - other medications (especially SSRIs)
2. What time did you last use?
3. Dose? Route?

**Signs/symptoms of intoxication:**
- New or worsening mental health symptoms (anxiety, panic, hallucinations, paranoia)
- Alertness, hypervigilance, impulsivity
- Euphoria, ↑ confidence, excitement
- Agitation, irritability, anger, hostility
- Psychomotor agitation (pacing, restlessness), repetitive movements, tremor
- Rapid/pressured speech
- Decreased appetite/need for sleep
- Flushed cheeks, sweating, dry mouth
- Teeth grinding, jaw clenching
- Dilated pupils or sluggish light reflex
- Hypersexuality, at risk sexual behaviours
- Hypertension, tachycardia
- Signs of recent physical injury (head injury)
- Injecting sites for signs of infection

**Toxicity (medical emergency)**

**Presentations of toxicity:**
1. Acute behavioural disturbance
2. Medical complications
   - hyperthermia
   - serotonin syndrome (see bottom right)
   - electrolyte disturbances (↓Na⁺, ↓K⁺), ↓BSL
   - rhabdomyolysis, renal failure
   - acute cardiac events
   - acute cerebrovascular events
   - delirium, seizures, coma, death

**Investigations:**
- Full set of physical observations
- Neurological examination including GCS, pupillary response, tone/power/tremor
- Finger-Prick Blood Sugar Level
- Urine Full Ward Test for proteinuria
- Pathology: FbV, EEC, Mg, LFTs, CK (add troponin if chest pain)

**Additional:**
- ECG (if chest pain, SOB, SaO₂ dropping, hypertension, or tachycardia)
- CT brain (if altered conscious state, focal neurological signs, severe headache)

**Management of Medical Complications**

**DRABC**
- Remain with patient
- Minimise stimulation in surrounding area
- Explain what is happening to patient and what they can expect (other clinicians arriving)

**Requires urgent medical care (+/- Code Blue) if:**
- BP ≥ 180/120 mmHg
- Chest pain, shortness of breath
- Severe headache
- Seizure
- Sudden neurological changes (e.g., speech changes or limb weakness, facial droop, gait disturbance)

**Serotonin syndrome/toxicity:**
- Temp ≥ 38°C, flushing, sweating, tachycardia, mydriasis
- ↑reflexes, shivering, tremor, clonus, myoclonus, ocular clonus, ↑muscle tone/rigidity
- Altered conscious state (including delirium, confusion, disorientation)

**Withdrawal**

Withdrawal symptoms can commence within 24 hours of the last dose, peak at day 2-3 after last use and can continue for 2 weeks. Consider polysubstance withdrawal.

**Common signs/symptoms of stimulant withdrawal:**
- Cravings
- Mood changes including irritability, agitation, low and/or anxious mood, anhedonia, affective instability
- Psychomotor agitation
- ↑sleep, vivid dreams; ↑appetite
- Poor memory/concentration
- Fatigue, lack of energy, generalised aches/pains

**Management:**
- Determine safest environment for withdrawal
- Supportive treatment including diazepam (should be continued for up to two weeks).
- Mx acute physical/MH issues

**Note a high risk of relapse/overdose during this period.**
**Intoxication**

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   - amphetamines or methamphetamines?
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- ↑ sleep, vivid dreams; ↑ appetite
- Poor memory/concentration
- Fatigue, lack of energy, generalised aches/pains

Management:
- Determine safest environment for withdrawal
- Supportive treatment including diazepam (should be continued for up to two weeks).
- Mx acute physical/MH issues

**Note a high risk of relapse/overdose during this period.**
GUIDELINES FOR THE MANAGEMENT OF ACUTE BEHAVIOURAL DISTURBANCE DUE TO AMPHETAMINE-TYPE STIMULANT INTOXICATION

**STEP 1** – (Arousal levels 2-3)
Mildly aroused, pacing, still willing to talk reasonably.
Moderately aroused, agitated, becoming more vocal, unreasonable and hostile.

**OR**
(Benzodiazepines) Diazepam (peak effect at 1–1.5 hrs): 5 to 20mg, repeated every 2 to 6 hours, up to a maximum of 120mg in 24 hours

**OR**
(Antipsychotic) Olanzapine (peak effect at 1 to 3 hrs): 5-10mg repeated if necessary every 2 hours to a maximum of 30mg in 24 hours.

**Review** after 30-60 minutes, repeat if necessary every 2 hours. *If still ineffective, consider Step 2*

**STEP 2** – (Arousal levels 3-4)
Moderately aroused, agitated, becoming more vocal, unreasonable and hostile.
Highly aroused, possibly distressed and fearful.

**OR**
(Antipsychotic) Olanzapine (peak effect at 6hrs):
10-20mg wafer repeated if necessary every 2 to 6 hrs up to a maximum of 30mg in 24 hours.

**PLUS**
(Benzodiazepines) Diazepam (peak effect at 1–1.5 hrs): 5 to 20mg, repeated every 2 to 6 hours, up to a maximum of 120mg in 24 hours.

**Review** after 30-60 minutes, repeat if necessary. *If still ineffective, consider Step 3*

**STEP 3** – (Arousal levels 4-5)
Refusing oral medication, moderately aroused, agitated, becoming more vocal, unreasonable and hostile.
Highly aroused, distressed and fearful; violent toward self, others or property.

**INTRAMUSCULAR**
(Antipsychotic) Olanzapine (peak effect at 15 to 45 mins): 10mg may repeat every 2 hrs to a max. of 30mg in 24 hrs OR
Dropierad (peak effect at ≤30 mins) 2.5-10 mg IMI, may repeat every 20 mins. to a max. of 20mg in 24 hrs OR
Zuclopenthixol Acetate (onset ≤2h, peak effect ~24h)
Note: Use only if 1 &/or psychotic disorder, high likelihood of recurrent agitation & aggression, and maximum daily dose of IM olanzapine inadequate.
1st dose 100mg (lower in elderly or small stature). 2nd dose after 48-72 hrs (min. 24 hrs). 3rd dose after 48-72 hrs (min. 24 hrs). Concurrent IM Benzodiazepine (in separate syringe). Avoid giving other IM antipsychotics.

(Benzodiazepines) Clonazepam (peak effect at 3 hrs):
1-2 mg, may repeat after 2 hrs, then every 4 hrs up to 4mg in 24 hrs. OR, if more rapid but shorter effect is required, consider Midazolam 0.1mg/kg.

**PRECAUTIONS:**
- **Lower doses** should be considered in the elderly, patients with low body weight, dehydration or no previous exposure to antipsychotic medication.
- Monitor **respiratory function** when benzodiazepines are administered, especially parenterally.
- Monitor **postural BP** 30 min post-dose.
- Monitor **ECG, K & Mg**, especially if using high doses of antipsychotics.
- Monitor **ECG, FBE, U&F, Mg, CK and troponin** if using zuclopenthixol acetate

**N1** Create opportunity and environment for patient to express fears, frustration, anger, etc. *(Ventilation)*

**N2** Explore with patient what interventions/solutions would assist them to gain control *(Redirection)*

**N3** Assess “time out” opportunity for patient to regain control (5-15min duration) *(Time Out)*

**N4** If clinical situation warrants, patient may require restriction *(Restraint)*

**N5** If required to place client in a safe environment seclusion might be considered. Explanation to be given to patient and staff *(Seclusion)*

The patient should be afforded the opportunity to debrief about the episode, at a reasonable interval.

**ALERTS:**
- Vigilantly monitor for signs of airway obstruction, respiratory depression and hypotension *(esp. Acuphase)*
- EPSs must be monitored and treated.
- Anticholinergic agents *NOT* to be used routinely but as required *(PRN)*; Benztrapine 2mg IM may be used for acute dystonias *(Max 6 mg/24 hrs).*
- Combined use of Olanzapine IMI plus a benzodiazepine is potentially dangerous: a gap of 2 HOURS IS REQUIRED BETWEEN THEIR IM USES.
- IM Midazolam should only ever be prescribed by a consultant and special precautions MUST be followed
- Zuclopenthixol acetate should be prescribed as a course, NOT as PRN. ≤4 IMI, ≤400mg in 2 wks
Step 1

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Moderately aroused, agitated, becoming more vocal, unreasonable and hostile.

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**OR**

(Antipsychotic) **Olanzapine** (peak effect at 1 to 3 hrs): 5-10mg repeated if necessary every 2 hours to a maximum of 30mg in 24 hours.

*Review* after 30-60 minutes, repeat if necessary every 2 hours. *If still ineffective, consider Step 2*
Step 2

STEP 2 – (Arousal levels 3-4)
Moderately aroused, agitated, becoming more vocal, unreasonable and hostile. Highly aroused, possibly distressed and fearful.

ORAL

(Antipsychotic) **Olanzapine** (peak effect at 6hrs): 10-20mg wafer repeated if necessary every 2 to 6 hrs up to a maximum of 30mg in 24 hours.

**PLUS**

(Benzodiazepines) **Diazepam** (peak effect at 1 –1.5 hrs): 5 to 20mg, repeated every 2 to 6 hours, up to a maximum of 120mg in 24 hours.

*Review* after 30-60 minutes, repeat if necessary. *If still ineffective, consider Step 3*
STEP 3 – (Arousal levels 4-5)
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Highly aroused, distressed and fearful; violent toward self, others or property.

INTRAMUSCULAR

(Antipsychotic) Olanzapine (peak effect at 15 to 45 mins): 10mg may repeat every 2 hrs to a max. of 30mg in 24 hrs
OR
Droperidol (peak effect at ≤30 mins) 2.5-10 mg IMI, may repeat every 20 mins. to a max. of 20mg in 24 hrs
OR
Zuclopenthixol Acetate (onset ≤2h, peak effect ~24h)
Note: Use only if 1° psychotic disorder, high likelihood of recurrent agitation/aggression, and maximum daily dose of IM olanzapine inadequate.
1st dose 100mg (lower in elderly or small stature).

(Benzodiazepines) Clonazepam (peak effect at 3 hrs): 1-2 mg, may repeat after 2 hrs, then every 4 hrs up to 4mg in 24 hrs. OR, if more rapid but shorter effect is required, consider Midazolam 0.1mg/kg:
**PRECAUTIONS:**

- **Lower doses** should be considered in the elderly, patients with low body weight, dehydration or no previous exposure to antipsychotic medication.
- Monitor **respiratory function** when benzodiazepines are administered, especially parentally.
- Monitor **postural BP** 30 min post-dose.
- Monitor **ECG, K & Mg**, especially if using high doses of antipsychotics.
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**N4** If clinical situation warrants, patient may require restraint *(Restraint)*

**N5** If required to place client in a safe environment seclusion might be considered. Explanation to be given to patient and staff *(Seclusion)*

The patient should be afforded the opportunity to debrief about the episode, at a reasonable interval.

**ALERTS:**

- Vigilantly monitor for signs of airway obstruction, respiratory depression and hypotension *(esp. Acuphase)*
- EPSEs must be monitored and treated.
- Anticholinergic agents NOT to be used routinely but ‘as required’ *(PRN)*; Benztropine 2mg IM may be used for acute dystonias *(Max 6 mg/24 hrs)*.
- Combined use of **Olanzapine IMI** plus a benzodiazepine is potentially dangerous: a **gap of 2 HOURS IS REQUIRED BETWEEN THEIR IM USES**.
- IM Midazolam should only ever be prescribed by a consultant and special precautions MUST be followed
- Zuclopenthixol acetate should be prescribed as a course, **NOT as a PRN. ≤4 IMIs, ≤400mg in 2 wks**
Verbal de-escalation

**Approach**
- Non-judgemental
- Calm
- Respectful
- Clear communication style (short sentences, summarising, plain language)
- Brief intervention if possible
- Minimise questions, restrict them to what is necessary for safety and establishing management – likely low frustration tolerance

**Environment**
- Low stimulus environment where possible
- Exits easily accessible to all
- Do not position directly in front of patient or less than arm’s length where possible

*Offer oral benzodiazepines early*
Benzodiazepines

Benzodiazepines as the agent of choice

• influence fewer neurotransmitter systems than antipsychotic agents, and are thus considered safer
• most agitated patients are more willing to accept treatment with a benzodiazepine than with an antipsychotic
• following sedation with benzodiazepines patients tend to be calmer and better organised (may reduce heat ‘generation’/promote heat dissipation)
• part of first line treatment for cardiac toxicity associated with psychostimulant use
• may exert some benefit in the agitation associated with serotonin toxicity
• Raises seizure threshold: 1st line treatment for psychostimulant-induced seizures.
Management of Patients with Psychostimulant Toxicity: Guidelines for Emergency Departments (DOHA, 2006)

Protocol A: Oral Benzodiazepine (Diazepam)

- Initial dose of 10-20mg of **diazepam** administered orally (po).
- If behavioural control or a state of rousable drowsiness is achieved within 30 minutes of the first dose, no more sedation should be administered.
- If there is no clinical response or insufficient clinical response at 30 minutes, an additional 10 mg of diazepam should be administered.
- Repeat this regime until the patient is in a state of rousable drowsiness, or a total dose of 60mg of diazepam has been administered (only exceed 60mg if no obvious signs of respiratory depression are evident. Do not exceed 120 mg in a 24-hour period).

Protocol B: Antipsychotics (failed benzodiazepine regimen)

- Droperidol can be used in the ED setting preferably after the absence of prolonged QTc is assured.
- A dose of 2.5-5mg can be given Q20mins until a maximum dose of 20mg in 24 hours is reached.
- Adverse effects include sudden hypotension and laryngeal dystonia.
- Droperidol should not be administered to antipsychotic naïve patients unless an adequate benzodiazepine regimen exhausted (7).
- Alternate is olanzapine 10mg IM
Management of Acute Amphetamine Related Problems (DAO WA, 2006)

**Mild arousal** (person is alert, may be irritable but cooperative, able to engage in assessment, normal vital signs): Sedate by oral medication – **diazepam** 5-10 mg or **clonazepam** 0.5-2 mg or **lorazepam** 1-2.5 mg, repeating after 30-60 min if necessary. Escalate to **olanzapine** 5-10 mg or **haloperidol** 2.5-5 mg if no effect.

**Moderate arousal** (person is restless, hostile and uncooperative, raised vital signs): Sedate with **intramuscular** medication if oral medication is refused – **midazolam** 5-10 mg or **clonazepam** 1-2 mg, repeating after 30-60 min if necessary. Escalate to **olanzapine** 5-10 mg or **haloperidol** 2.5-5 mg if no effect. Flumazenil should be available for reversal of respiratory depression risk from administration of midazolam.

**High arousal** (person is distressed, highly agitated, uncooperative and potentially violent): Sedate with **intravenous** medication if oral or **intramuscular** medication is refused and the situation is urgent. A free running IV line is preferred to dispense medication over several minutes – **diazepam** 5-10 mg, repeating in 5mg increments until adequately sedated. Escalate to **haloperidol** 2.5-5mg or **midazolam** 2.5-5mg if no effect. Resuscitation equipment and flumazenil should be available for reversal of respiratory depression risk from administration of midazolam.

Guidelines for the medical management of patients with methamphetamine-induced psychosis (DASSA, 2006)

Stepped care approach

1. Offer oral medication early. Doses should be titrated to scores on the Level of Agitation Scale (LOA). Initially use Lorazepam – dose of 2–4 mg [maximum dose of 4mg in the first hour], and repeat again an hour later if necessary.

2. If patient is highly agitated, LOA >4, and refuses oral medication, consider administering midazolam 5mg i.m. Repeat if no response after 10 minutes.

3. With failure of the previous two steps to achieve control, administer olanzapine. Initially give 10mg oral, or if oral medication refused, administer 10mg i.m.

4. If steps 1–3 fail, consideration needs to be given to repeating the steps or administering midazolam i.m. (Step 2).

5. If the patient remains agitated despite the above treatment physical restraint may be required, but should only be used as a last resort. In this case appropriate close supervision is necessary.

6. If an antipsychotic is used, its use must be reviewed within 3 days as routine ongoing administration of antipsychotic medication can usually be avoided.
Management of acute agitation in psychosis: an evidence-based approach in the USA (2011)

Cooperative patient

1a **Risperidone** 2–6 mg/day oral with or without lorazepam (≤4 mg/day) oral

1b **Olanzapine** 5–25 mg/day oral

2a **Aripiprazole** 15–30 mg/day oral

2b **Quetiapine** 300–800 mg/day oral (if hostile/aggressive)

Uncooperative patient

1a **Olanzapine** 10 mg intramuscular (careful with hypotensive patients or concomitant parenteral benzodiazepines)

1b **Ziprasidone** 10–20 mg intramuscular (careful with patients with cardiac or renal impairment)

1c **Aripiprazole** 9.75 mg intramuscular (careful with parenteral benzodiazepines)

2 **Haloperidol** 10 mg intramuscular

3 **Lorazepam** 2 mg intramuscular (not to be used as an adjunct to aripiprazole). May be given along with 5 mg intramuscular haloperidol
The psychopharmacology of agitation: Consensus statement of the American Association for Emergency Psychiatry Project BETA (2012)

Agitation Due to Intoxication (Drugs)

• For intoxication with most recreational drugs, especially stimulants, benzodiazepines are generally considered first-line agents.

• A minority of chronic amphetamine users develop psychotic symptoms from their amphetamine use. In these patients, a second generation antipsychotic may be useful in addition to a benzodiazepine.

• Antipsychotics are indicated as first-line management of acute agitation with psychosis of psychiatric origin (eg, a schizophrenic who is agitated due to delusional paranoia).

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1. Oral Benzodiazepines
   lorazepam 1-2 mg
   chlordiazepoxide 50 mg
   diazepam 5-10 mg

2. Parenteral Benzodiazepines
   lorazepam 1-2 mg IM or IV

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1. Oral 2nd-generation Antipsychotics
   risperidone 2 mg†
   olanzapine 5-10 mg‡

2. Oral 1st-generation Antipsychotics
   haloperidol 2-10 mg with BZN

3. Parenteral 2nd-generation Antipsychotics
   olanzapine 10 mg IM‡
   ziprasidone 10-20 mg IM‡

4. Parenteral 1st-generation Antipsychotics
   haloperidol 2-10 mg IM with BZN

† If an antipsychotic alone does not work sufficiently, add lorazepam 1-2 mg (oral or parenteral).
RANZCP and ANZCA
Sedation Guidelines Working Group

Australian and New Zealand College of Anaesthetists (ANZCA)
Guidelines on Sedation and/or Analgesia for Diagnostic and Interventional Medical, Dental or Surgical Procedures, 2013 [“excludes psychiatrically disturbed patients”]

Working party of anaesthetists and psychiatrists (and other relevant medical practitioners) established to progress development of further guidelines or statements on the use of sedation in mental health settings.

Analysis of the more than 40 guidelines from various mental health services across Australia and New Zealand
• Draft guideline to be put out for consultation mid-2016
Treatment of withdrawal

- Mainstay of treatment for acute withdrawal is symptomatic
- Benzodiazepines (diazepam)
- Focus on controlling anxiety, agitation and restoring sleep
<table>
<thead>
<tr>
<th>Stage</th>
<th>Definition</th>
<th>Characteristics</th>
<th>Intervention/Tasks</th>
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| Precontemplation      | Individual has no intention to change behaviour in the near future and may not identify a problem with their behaviour. | May appear unmotivated or resistant  
Avoid information, discussion or thoughts regarding the behaviour  
Defensive or sometimes passive | Engage; avoid being judgmental  
Raise doubt; ↑ awareness of risks/problems a/w using  
Brief interventions: educ", harm red"  
Provide DirectLine no.: 1800 888 236 |
| Contemplation         | Individual considering change; ambivalent.  
Although they may be aware of the benefits, they remain focussed on the costs of change. | Ambivalent about using/stopping  
Dissonance between “good” and “less good” aspects of using  
Might procrastinate | Motivational interviewing, incl:  
Decisional balance: evoke reasons for change, risks of not changing; facilitate pt to develop discrepancy  
Strengthen self-efficacy for change |
| Determination /       | Making of decision, making plans. Individuals intend to take steps toward change (eg within the next month). This stage is viewed as a transitional rather than a stable phase. | Planning and intending to change | Offer options and assist in developing strategies to change; may incl. discussion of detox, psychotherapy, pharmacotherapy, lifestyle changes |
| Preparation           |                                                                                                                                  |                                                                                 |                                                                                             |
| Action                | Individual is firmly decide and is making change.  
May be considered to be within this stage if these modifications have occurred for less than 6 months. | Modifications in behaviour  
Commitment (verbalised or demonstrated)  
Open to suggestions | Support implementation of a plan  
Use skill base; problem solve  
Support self-efficacy  
Begin to discuss lapses/relapses |
| Maintenance           | Individual’s change in behaviour has been sustained over a period of time.                                                      | Works to prevent relapse  
Reports higher levels of self-efficacy  
Consolidates gains achieved in the Action stage  
Less frequently tempted to use | Identify and use strategies to prevent relapse; consolidate other activities  
Resolve associated issues/problems (e.g. mental illness)  
Help set new goals |
| Lapse/Relapse         | Individual returns to the behaviour, temporarily (lapse) or for a longer period of time (relapse).                                 | Lapses → Action stage  
Relapses → any other stage  
Particular feelings of failure/guilt may appear  
Both can provide valuable learning opportunities | Anticipate and plan for both  
Normalise relapse as a common occurrence; empathise, encourage  
Assist person to look at why it occurred and make plans to cope with similar situations in the future  
Assist person to renew motivation and efforts |
GUIDELINES FOR THE LONG-TERM MANAGEMENT OF AMPHETAMINE MISUSE AND DEPENDENCE

SVHM

Version 1 (2014)

Assessment

1. Assess current patterns of substance use
   - What, how much, how often (days off), route, past withdrawal or treatment, past abstinence

2. Assess for and treat comorbidity
   - Other substances
   - Mental health (e.g. psychosis, MDE)
   - Physical health (e.g. infection, dental, cardiac)

3. Assess risks
   - Overdose, toxicity
   - Local/systemic infection incl. blood-borne viruses, cardiac/cerebrovascular events, poor dentition, STIs, poor nutrition, dehydration
   - Accidental injury, violence (incl. sexual)
   - Psychosis, SI, worsening of MS
   - Poverty, homelessness, relationship breakdown, unemployment
   - Legal difficulties (drug driving, illicit activities to fund use, possession/dealing)

4. Assess for evidence of dependence
   - A person may be at higher risk of dependence if they:
     - Use crystal methamphetamine ("ice")
     - Use frequently and in higher doses
     - Inject

5. Assess stage of change

6. Assess goals of treatment
   - Cessation vs cutting back
   - Continue or cease other drug use
   - Other goals including improving sleep, mental state, physical health, social/occupational function

Management

BRIEF INTERVENTION

- Harm reduction advice
- Education about stimulants and the potential impact on physical and mental health
- Motivational interviewing matched to stage of change
- Mental and physical health screens (can also be used as part of education)
- Drug and alcohol counselling (may include referral to DoAM or an external agency)

SUPPORTED WITHDRAWAL

The management of amphetamine withdrawal is largely supportive, as there is no specific pharmacotherapy at this time. Although many people can safely be managed at home, consider an environment with increased supports in the setting of:
- The use of, or withdrawal from, multiple substances
- Mental health needs requiring immediate management, including an increased risk of harm to self or others
- Physical health needs requiring immediate management
- A lack of a suitable supportive environment in the community

MANAGEMENT OF DEPENDENCE

Medication

- No specific substitution therapy.
- Consider mirtazapine, particularly if co-existing anxiety/depression.

Psychosocial interventions

- Motivational Interviewing (MI)
- Cognitive behaviour therapy (CBT)
- Relapse prevention strategies
- Mindfulness-based cognitive therapy (MBCT)
- Acceptance and Commitment therapy (ACT)
- Consider referral to AOD Counselling

Self-help/Peer support groups

- Narcotics Anonymous
- Smart Recovery
- Crystal Meth Anonymous
- New Life Program
- Family Drug Help
- Family Drug Support Australia

Residential Rehabilitation

- DirectLine (1800 888 236) for 24hr information and referral advice for patients, carers, and clinicians.
Assessment

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  - Smart Recovery
  - Crystal Meth Anonymous
  - New Life Program
- Carer support groups
  - Family Drug Help (incl. Sibling Support)
  - Family Drug Support Australia
- Residential Rehabilitation
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Mirtazapine therapy

Archives of General Psychiatry, November 2011

60 participants – actively using, meth-dependent, sexually active MSM (56 participants completed final visit [93%])

Randomised, double-blind, controlled 12 week mirtazapine trial

- Treatment arm – 30mg mirtazapine + 30minute weekly drug counselling
- Placebo arm – placebo + 30minute weekly drug counselling

Follow up – weekly urine sample collections

Results

Compliance with medication – 74.7% (self reported)

- Treatment arm – 73% of samples positive → 44% of samples positive.
- Placebo arm – 67% of samples positive → 63% of samples positive

RR of 0.57 (0.35-0.93) NNT 3.1 to achieve negative weekly urine sample

Also reduced sexual risk behaviours, number of partners, episodes of anal sex with serodiscordant partners
Replacement therapy

**Modafinil**
Heinzerling KG et al, 2010 - Nil significant change

- 400mg daily, 3x weekly urine samples
Shearer J et al, 2009 – Ni change cravings, abstinence, use etc
- 200mg daily, regular urine samples *trend towards reduced*

**Dexamphetamine**
Longo et al, 2010 – trend towards decreased meth (p=0.086)

- 12 week program – 49 patients, 23 randomised to 110mg/day Dexamphetamine SR. All received 4 sessions CBT.
- Measurements – methamphetamine consumption (reported and hair sample analysis (LCMS), dependence scoring (Leeds Dependence questionnaire)
- Results:
  - Increased likelihood of completing program (86.3 vs 48.6 ave)
  - Decreased self-reported / LCMS meth usage (p<0.0001) for both placebo and control. Nil significant difference between them.
  - Decreased dependence (LDQ) compared with placebo group
  - 1 x episode of HTN requiring dose reduction
References


Psychostimulant Check-up Training Kit. Drug and Alcohol Services South Australia, March 2008.


References


Guidelines for the medical management of patients with methamphetamine-induced psychosis. Drug and Alcohol Services South Australia, 2006.


Psychostimulant information for health care workers, Queensland Health 2006.


References

1. Therapeutic Guidelines (e.g. Complete March 2014) Psychotropic v.7 Behavioural Emergencies: http://online.tg.org.au


If you would like a list of resources on amphetamine use disorders please email: nexusdd@svha.org.au
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