ST VINCENT'S HEALTH AUSTRALIA

NEXUS
Concurrent Mental Illness & Substance Use Advisory Service

Dual Diagnosis
VDDI

Amphetamines:
A complex care approach

VDDI Statewide Forum 2016

The Treacy Centre, Parkville

Tuesday 25/10/16, 2.35-3.05

Dr Kah-Seong Loke

Nexus Dual Diagnosis Service

Ice – Complex Issues

ST VINCENT'S HEALTH AUSTRALIA

- Acute issues
- Dual diagnosis
- Forensic issues and Legal interventions
- Family inclusive practice
- Responding to trauma
- Cultural safety
- Gender sensitivity and safety

ACUTE ISSUES

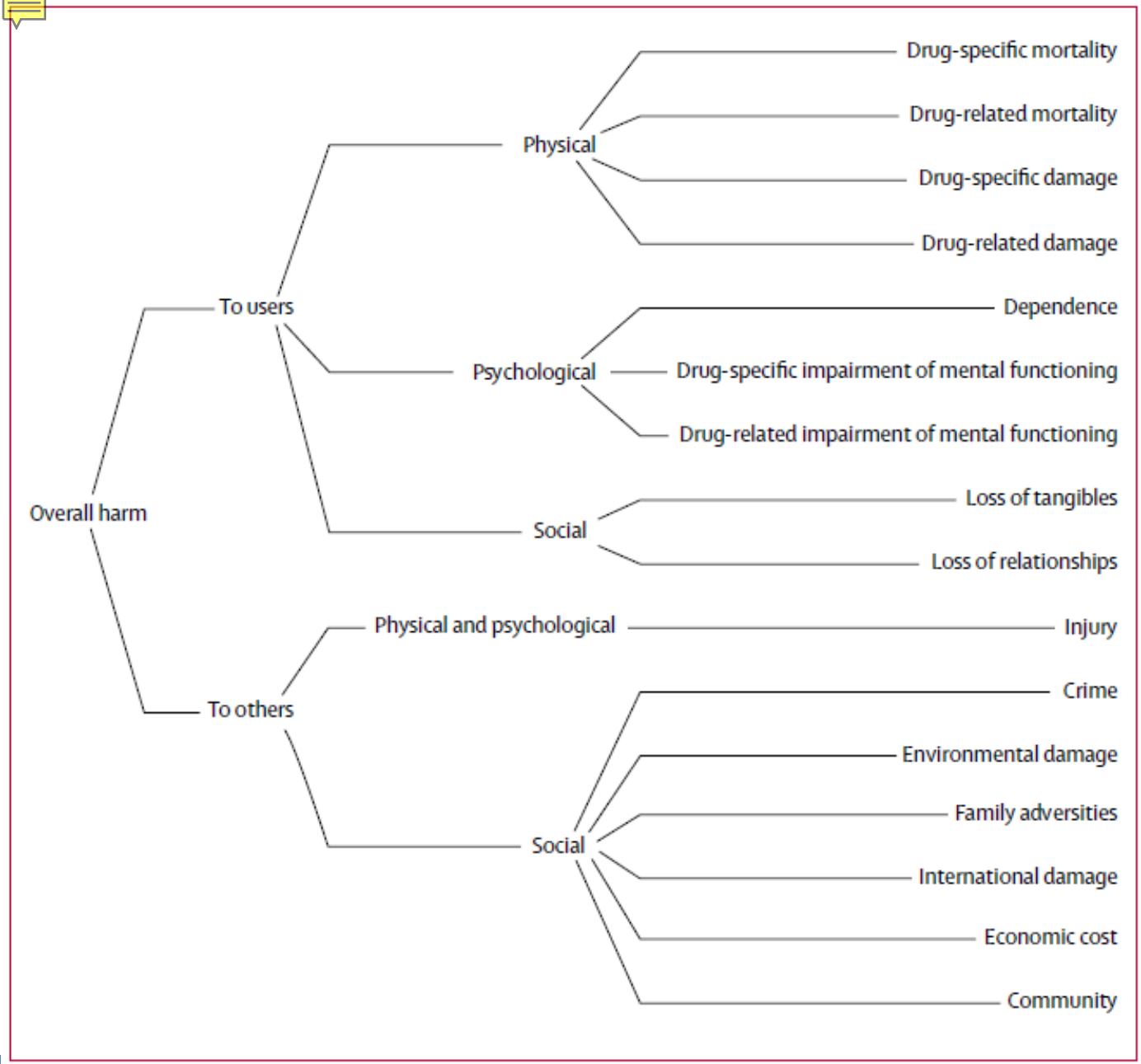


Figure 1: **Evaluation criteria organised by harms to users and harms to others, and clustered under physical, psychological, and social effects**

ST VINCENT'S HEALTH AUSTRALIA

Harms from drug use

Nutt DJ, King LA, Phillips LD; Independent Scientific Committee on Drugs. Drug harms in the UK: a multicriteria decision analysis. Lancet. 2010 Nov 6;376(9752):1558-65.

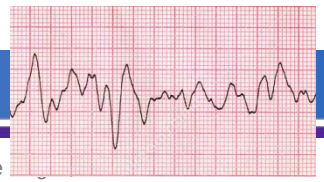
Morbidity & Mortality from ATS

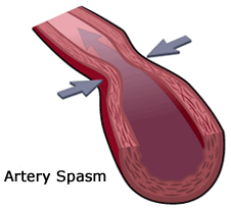
- Toxic reactions can occur irrespective of dose, frequency of use, or route of admin.
- Demographics: Mostly male, mid-30s

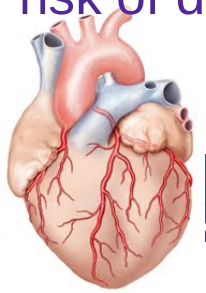
Non-fatal presentations: Chest pains, palpitations, tachycardia and hypertension most common complaints among methamphetamine users presenting to hospital

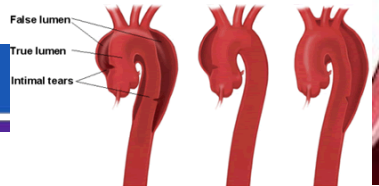
Cause of death: Typically caused by seizures, cardiac arrhythmias, or respiratory failure

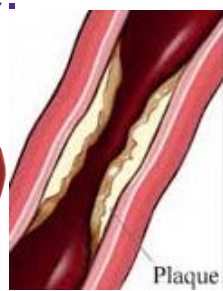
- Cardiotoxicity: heavy demands upon the cardiovascular system; can cause myocardial ischaemia and infarction; hypercoagulable state, and macrovascular epicardial coronary spasm; cardiac arrhythmias
- Cerebrovascular accidents: Increases risk of ischaemic and haemorrhagic stroke. Higher associated risk of death after stroke.
- Aortic dissection







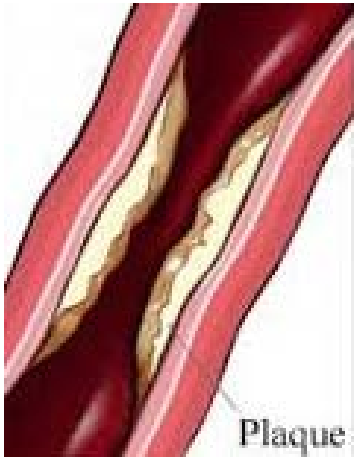




Morbidity & Mortality from ATS

Chronic health effects increasing mortality

- **Coronary artery disease:** Premature and accelerated development of coronary artery atherosclerosis
- **HIV, HCV** ↑ transmission risk, and anti-viral medication non-adherence



Darke S, Kaye S, McKetin R, Duflou J. Major physical and psychological harms of methamphetamine use.
Drug Alcohol Rev. 2008 May;27(3):253-62.

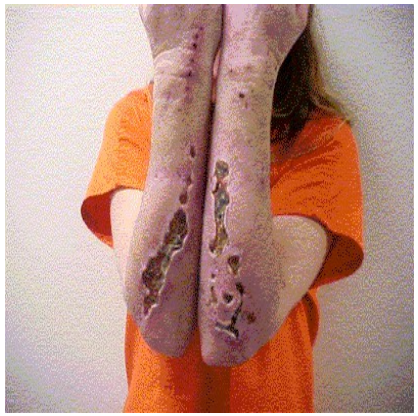
Short-term effects

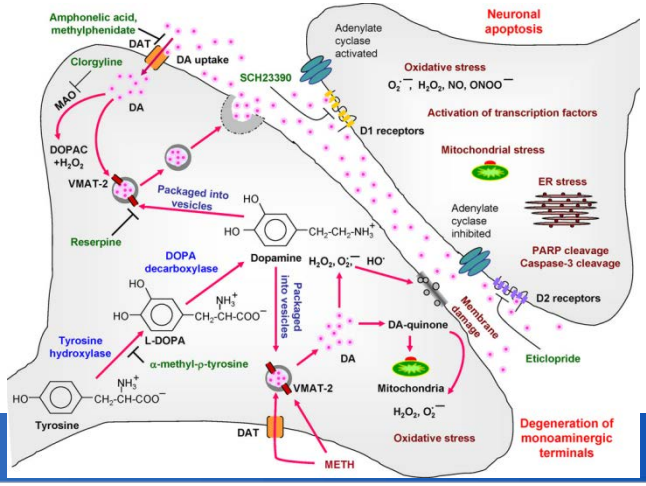
- Euphoria, alertness, increased confidence and wakefulness

- 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 (ABI):**
  - 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**





GUIDELINES FOR THE ACUTE ASSESSMENT AND MANAGEMENT OF AMPHETAMINE-TYPE STIMULANT INTOXICATION AND TOXICITY

SVHM

Version 1 (2014)

Intoxication

Important questions:

1. In the last 24-48hrs, have you used:
   - amphetamines or methamphetamines?
   - other stimulants (eg high dose caffeine, cocaine, MDMA, new synthetic stimulants, prescription stimulants)?
   - other substances (eg 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, hypervigiliance, 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: FBVEEUC, Mg, LFTs, CK (add troponin if chest pain)

Additional:

- ECG (if chest pain, SOB, SaO_2 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 (eg. 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.**

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ST VINCENT'S HEALTH AUSTRALIA

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- Mx acute physical/MH issues

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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.

ORAL

(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.

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)
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
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).
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 IMI 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 parentally.
- Monitor postural BP 30 min post-dose.
- Monitor ECG, K & Mg, especially if using high doses of antipsychotics
- Monitor ECG, FBE, U&E, 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 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

Step 1

STEP 1 – (Arousal levels 2-3)
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ST VINCENT'S HEALTH AUSTRALIA

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Step 2

STEP 2 – (Arousal levels 3-4)
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- Zuclopenthixol acetate should be prescribed as a course, *NOT as a PRN.* ≤4 IMIs, ≤400mg in 2 wks

Stages of Change and Matching Interventions

Stage	Definition	Characteristics	Intervention/Tasks
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^{n}, harm red^{n} 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 / Preparation	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
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 (eg psychosis, MDE)
   - Physical health (eg 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

ST VINCENT'S HEALTH AUSTRALIA

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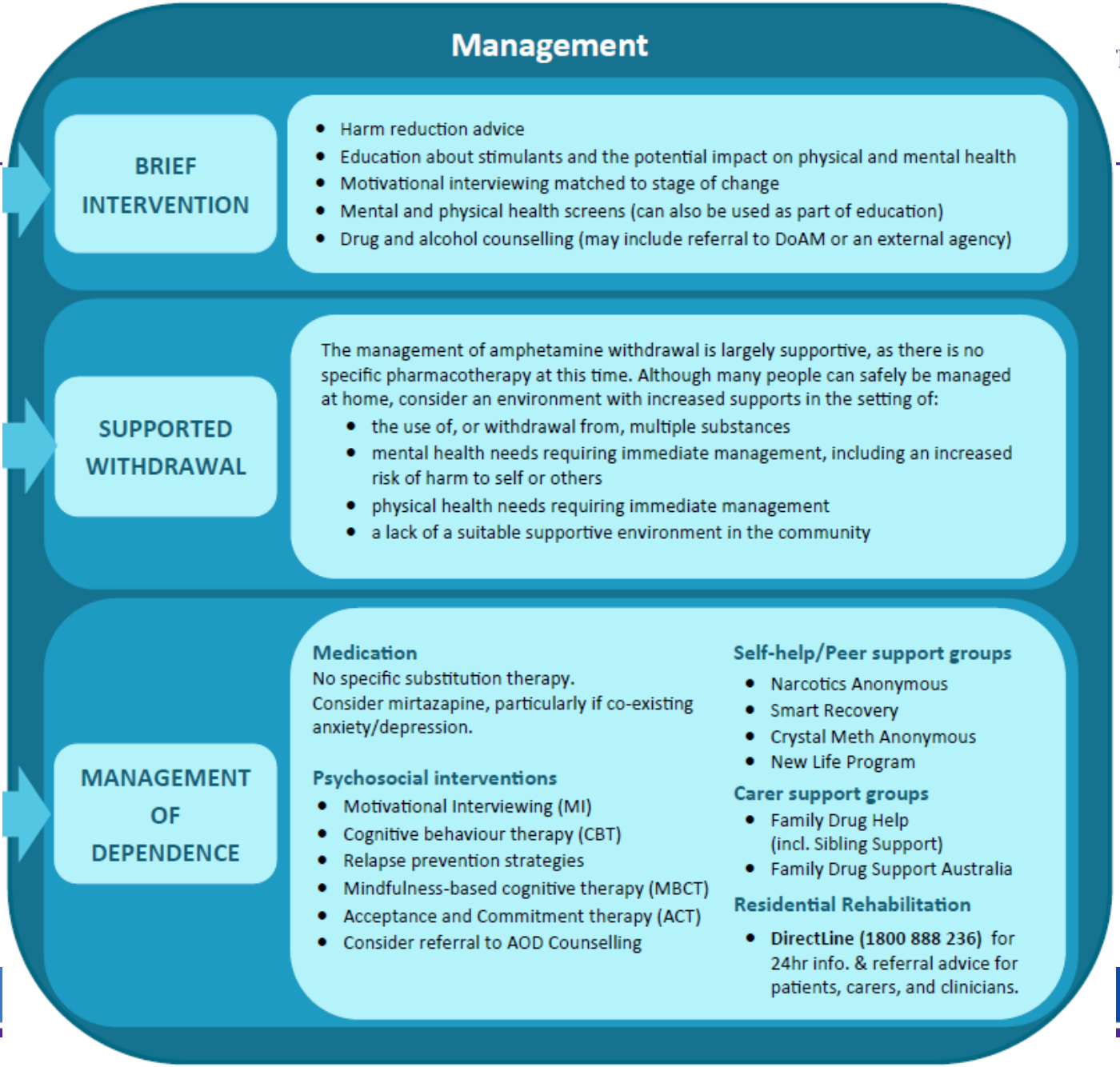
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ST VINCENT'S HEALTH AUSTRALIA

DUAL DIAGNOSIS

Comorbidity of Stimulant-related disorders (DSM-5)

ST VINCENT'S HEALTH AUSTRALIA

Co-occurrence with other substance use disorders:

- especially those involving **CNS depressants**, which are often taken to reduce insomnia, nervousness, and other unpleasant side effects (come down)
- **Alcohol**
- **Cannabis**
- Alprazolam
- **Quetiapine**
- **GHB/GBL, mephedrone; cocaine, ketamine (MSM population; "chemsex")**

Comorbidity of Stimulant-related disorders (DSM-5)

ST VINCENT'S HEALTH AUSTRALIA

Co-occurrence with other mental disorders

(dual diagnosis)

- Posttraumatic stress disorder
- Antisocial personality disorder
- [?Narcissistic personality traits/vulnerability]
- [??BPD]
- Attention-deficit/Hyperactivity disorder
- Gambling disorder

Reasons for ongoing use of ice by gender – all respondents

Reason	Male	Female
I like the feeling of being high	58.0%	55.4%
To party and socialise	55.4%	44.2%
I want to escape reality	32.7%	44.8%
I have issues and thoughts I don't want to deal with	27.7%	42.0%
To feel confident	26.0%	31.6%
I feel like I think more clearly	20.0%	22.3%
All my friends use it	19.4%	20.1%
I used it a bit and now can't stop	17.5%	26.0%
To help me focus at work	15.6%	12.8%

Reasons for ongoing use of ice by frequency of use

Reason	Daily user	Occasional user
I like the feeling of being high	57.9%	52.5%
I want to escape reality	52.1%	24.0%
I have issues and thoughts I don't want to deal with	51.0%	18.1%
I used it a bit and now can't stop	50.6%	1.8%
To feel confident	38.0%	20.0%
To party and socialise	35.1%	68.7%
All my friends use it	28.0%	11.7%
I feel like I think more clearly	27.7%	13.7%
To help me focus at work	25.1%	4.6%

Comorbidity of Stimulant-related disorders (DSM-5)

ST VINCENT'S HEALTH AUSTRALIA

Stimulant*-induced disorders in DSM-5:

Psychotic disorders	Bipolar disorders	Depressive disorders	Anxiety disorders	Obsessive-compulsive and related disorders	Sleep disorders	Sexual dysfunct[ns]	Delirium	Neurocog-nitive disorders
I	I/W	I/W	I/W	I/W	I/W	I	I	

I: "with onset during [stimulant] intoxication"
W: "with onset during [stimulant] withdrawal"

*Includes amphetamine-type substances, cocaine, and other or unspecified stimulants.

FAMILY INCLUSIVE PRACTICE

Families, Partners and Carers

ST VINCENT'S HEALTH AUSTRALIA

Harm to others from SUDs

- FASD
- Neglect CD,ODD, ASPD
- Trauma/PTSD
- Parentification
- Drug/drunk driving→ MVA
- Adolescent violence
- Property loss/damage
- Homelessness
- Drug supply chain, dealing
- Intimate partner violence
- Child abuse → CPS involvement
- Pathological grief (guilt)
- Hostile-dependent relationships

Links, Family dynamics

- Victims
- Predisposing: "Causers" – genetic, role modellers, abusers
- Precipitating/Perpetuating: "Enablers" (direct/indirect); "Rejecters" – critical, judgmental, conflictual
- Protective: Supporters (+)

Services

- Family Drug Help
- Family Drug Support
- Odyssey House Family Eclipse Program
- Etc.

For some consumers/clients, their carers/loved ones can form a critical part of their recovery capital when positively engaged; the reverse may also be true.

FORENSIC/LEGAL ISSUES

Legal instruments
("External motivators")

ST VINCENT'S HEALTH AUSTRALIA

- **Severe Substance Dependence Treatment Act 2010**
  - St Vincent's Hospital (Melb.) / Depaul House
  - http://www.health.vic.gov.au/ssdta/
- **Guardianship and Administration Act 1986**
  - Victorian Civil and Administrative Tribunal (VCAT) - Guardianship List
  - https://www.vcat.vic.gov.au/adv/disputes/guardians-administrators
- **Children, Youth & Families Act 2005 / Commission for Children & Young People Act 2012**
  - Department of Health & Human Services (DHHS) - Victorian Child Protection Service
  - http://www.dhs.vic.gov.au/for-individuals/children,-families-and-young-people/child-protection
- **Road Safety Act 1986**
  - VicRoads
  - https://www.vicroads.vic.gov.au/licences/medical-conditions-and-driving
- **Health Practitioner Regulation National Law Act 2009**
  - Australian Health Practitioner Regulation Agency (AHPRA)
  - http://www.ahpra.gov.au/Notifications/Who-can-make-a-notification/Mandatory-notifications.aspx
- **Mental Health Act 2014**
  - Victoria's Approved Mental Health Services
  - https://www2.health.vic.gov.au/mental-health/practice-and-service-quality/mental-health-act-2014-handbook

Legal instruments

Court involvement (not mutually exclusive)

- Family Violence Intervention Orders
- Diversion programs
- Community Corrections Orders
- Custodial sentences
- Parole Orders

Specialist Courts & Court Support Services

- Victorian Drug Court (Dandenong only): Drug Treatment Orders
- Court Referral & Evaluation for Drug Intervention & Treatment Program (CREDIT) Bail Support Program
- Court Integrated Services Program (CISP)
  - https://www.magistratescourt.vic.gov.au/sites/default/files/Default/Guide%20to%20SCCSS%20-%202%20June%202014%20%28final%20version%29.pdf

Community Offenders Advice and Treatment Service (COATS): via diversion, CCOs, Parole Orders, CISP and Credit Bail.

Financial measures/ Loss prevention

Control the money flow → Control the drug flow!

- Intervening for a **gambling disorder** usually more urgent than with **substance use disorders. See:** http://www.money-school.net/tips_gambling.html
- Family members must not give money for drugs / bail them out
- (Part of) Centrelink payments sent to passbook account , Xmas club acct or carer's bank account
- Restrict access to ATM cards
- Close credit card accounts
- Administration orders

- Patients can circumvent these measures by various means, e.g. dealing drugs.

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