NCCRED

A Review of Australian Clinical Guidelines for Methamphetamine Use Disorder

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Acknowledgements

This document was written by Ann M Roche, Kirsten Ryan, Jane Fischer and Roger Nicholas of The National Centre for Education and Training on Addiction (NCETA) for The National Centre for Clinical Research on Emerging Drugs (NCCRED).

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About NCETA

The National Centre for Education and Training on Addiction (NCETA) is based at Flinders University in South Australia and is an internationally recognised research and training centre that works as a catalyst for change in the alcohol and other drug (AOD) field. NCETA's areas of expertise include training needs analyses, the provision of training and other workforce development approaches. We have developed training curricula, programs and resources, and provided training programs, to cater for the needs of: specialist AOD workers; frontline health and welfare workers; Indigenous workers; community groups; mental health workers; police officers; and employers and employee groups. The Centre focuses on supporting evidence-based change and specialises in change management processes, setting standards for the development of training curriculum content and delivery modes, building consensus models and making complex and disparate information readily accessible to workers and organisations.

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About NCCRED

The National Centre for Clinical Research on Emerging Drugs (NCCRED), was established by the Commonwealth Government in 2018 as part of the National Ice Action Strategy, recognising the need for improved treatments for methamphetamine, as well as more prompt detection and response to emerging drug threats.

NCCRED aims to support clinicians to detect and respond to new drug health problems by developing innovative and evidence-based new treatments for drug dependence; building clinical research capacity in the Australian AOD workforce; and the rapid translation of research findings into clinical practice.

The Centre was formed as a consortium between St Vincent's Health Australia (SVHA); The National Centre for Education and Training on Addiction (NCETA, Flinders University); The National Drug Research Institute (NDRI, Curtin University); and The National Drug and Alcohol Research Centre (NDARC, The University of New South Wales).

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Biographies

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Professor Ann Roche has over 30 years' experience in public health. She has worked as a policy analyst, researcher, and educator. For the past 18 years she has been the Director of NCETA. Previously, she was Director of the Queensland Alcohol and Drug Research and Education Centre (QADREC). She has held academic posts at several universities, and has worked in clinical, public health and community settings. Ann's professional activities have primarily focused on alcohol and other drug issues, particularly policy development, best practice, workforce development, research translation and dissemination.

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Kirsten Ryan (BBSC) (MSW) is a Project Officer at NCETA. Kirsten has extensive clinical experience working in the alcohol and other drug sector in South Australia. Prior to commencing at NCETA, Kirsten was employed as a senior social worker by Drug and Alcohol Services South Australia (DASSA). As part of this role, Kirsten was the senior social worker (Team Coordinator) at South Australia's therapeutic community program 'The Woolshed'. This included overseeing the assessment, admission, treatment and discharge planning for the 24-bed residential facility and accompanying halfway program.

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Dr Jane Fischer is a Research Fellow at NCETA. Prior to her NCETA appointment, Jane was the program manager for the Centre of Alcohol and Drug Studies (CDAS), located at 'Biala' Alcohol and Drug Services, Queensland Health. At CDAS she conducted translational AOD research and delivered AOD-related training to generalist (e.g. social workers, psychologists, nurses) and specialist AOD workers. Jane has also been a Research Officer at QADREC. She has also worked as a Needle and Syringe Program Worker and as an AOD Outreach Worker for Queensland Health.

Mr Roger Nicholas

Roger Nicholas is a Senior Project Manager at NCETA. He holds a Masters Degree in Public Administration (Policy) and his research and policy interests include regulatory and law enforcement responses to alcohol-related crime and disorder, drug misuse, and law enforcement and drug harm reduction. He is experienced in dealing with drug affected clients, law enforcement and methamphetamine use. Prior to his current appointment, Roger was employed in various clinical roles such as inpatient alcohol and drug detoxification, methadone programs and outpatient counselling services. He has also had experience as a clinical educator and in the policy environment.

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ABBREVIATIONS AND DEFINITIONS

Abbreviations

AIHW	Australian Institute of Health and Welfare
AOD	Alcohol and Other Drugs
AGREE GRS	Appraisal of Guidelines for Research and Evaluation Global Rating Scale
IOM	Institute of Medicine
NCCRED	National Centre for Clinical Research on Emerging Drugs
NCETA	National Centre for Education and Training on Addiction
NHMRC	National Health and Medical Research Council

Definitions

Clinical guidelines	Statements that include recommendations intended to optimise patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options (IOM, 2011).
Clinical practice	The performance of health professionals within any health care setting (NHMRC, 2011).
Companion document	A secondary publication directly adapted or derived from a clinical practice guideline for a particular group (e.g., patients or a particular health professional discipline (NHMRC, 2011)).
Health professionals	Any health worker who provides health care and related medical services, including doctors, nurses, Aboriginal health workers and allied health professionals (NHMRC, 2011).

EXECUTIVE SUMMARY

The National Centre for Clinical Research on Emerging Drugs (NCCRED) commissioned the National Centre for Education and Training on Addiction (NCETA), Flinders University to undertake a review of Australian methamphetamine-related clinical guidelines.

The project comprised four stages:

> 1: Identifying Australian methamphetamine clinical guidelines
>
> 2: Mapping guideline content for treatment settings and populations covered
>
> 3: Assessing guidelines against contemporary guideline criteria
>
> 4: Identifying gaps and implications for future guideline development.

Guidelines identified

Twenty-seven methamphetamine-related clinical guidelines were identified (see Section 3.1). Many of the guidelines were generic but contained sections relevant to methamphetamine.

Guideline coverage

Guidelines were mapped according to the treatment setting and population groups[1] that they covered. An overview of guideline coverage is presented in **Table 1** (see Table 4 for mapping in detail).

Table 1 - Summary of guideline coverage

Treatment Setting	Population Group Addressed							
	Generic	Young People	Rural & Remote	Aboriginal	LGBTIQ[a]	Families & Children	Perinatal	Other[b]
Alcohol and other drug (AOD) Specialist[1]	Yes	No	Yes	No	No	No	Yes	No
Hospital[2]	Yes	Yes	Yes	No	No	No	Yes	No
Primary and community care[3]	Yes	No	Yes	Yes	No	Yes	Yes	No
Telephone/ Online	No	No	No	No	No	No	No	No
Corrections	Yes	No	No	No	No	No	Yes	No
Not Defined	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

[a] Lesbian, gay, bi-sexual, trans-gender, intersex, queer; [b] for example, culturally and linguistically diverse (CALD), mental health, coerced.
[1] AOD Specialist: outreach, counselling services, at-home withdrawal, withdrawal service, residential rehabilitation and other/not specified; [2] Hospital: emergency department, general ward, perinatal, mental health (inpatient), AOD withdrawal (inpatient) and other/not specified; [3] Primary and community care: general practice, mental health and other/not specified. Not all population groups were addressed in all primary and community care settings.

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[1] Treatment setting categories and population risk groups were adapted from the *Final Report of the National Ice Task Force* (Department of Prime Minister and Cabinet, 2015).

Guideline appraisal

Guidelines were assessed against an NCETA-modified version of the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument (Brouwers et al., 2010). While current guidelines were not developed to explicitly meet the AGREE criteria, the assessment nonetheless provides a benchmark for future guideline development.

Fifteen of the 27 guidelines scored >70%, the AGREE threshold recommended by Brouwers et al. (2010) (see Appendix E for assessment details). Most guidelines did not meet the AGREE assessment criteria regarding:

- Adequate detail on processes by which they were developed
- Inclusion of target clinicians'/workers' or patients'/public views in the guideline development.

A number of guidelines used stigmatising and judgemental language that could undermine effective therapeutic relationships between patients and care providers.

Gap analysis

It was generally difficult to ascertain the processes by which guidelines were developed and the evidence base used to inform the guidelines. Limited research was available to inform guidelines and the need to strengthen the evidence base is highlighted as a priority.

While the available guidelines covered most of the relevant treatment settings and target population groups there were some notable gaps. In relation to treatment settings, clinical guideline gaps were identified in relation to primary and community care, telephone / online settings, correctional settings and general hospitals. In terms of population groups, lesbian, gay, bi-sexual, trans-gender, intersex, queer (LGBTIQ), Aboriginal, and rural and remote populations warranted further tailored guidelines.

Future guideline development

It is recommended that the AGREE Framework (or other guideline development standards as recommended by the National Health and Medical Research Council) is used to inform the development of future guidelines to address methamphetamine and other emerging drugs.

Guideline implementation

Future guidelines should comprise two components:

1. Desktop resource: A concise document that provides guidance for busy frontline clinicians which briefly addresses each of the treatment areas and population groups.

2. Bookshelf resource: A comprehensive companion document detailing the guideline development process and including:

   - A systematic literature review of the evidence base
   - Coverage of all main treatment approaches
   - Detailed implications for each of the treatment settings and population groups.

1. INTRODUCTION

The National Centre for Clinical Research on Emerging Drugs (NCCRED) commissioned The National Centre for Education and Training on Addictions (NCETA) to identify Australian clinical guidelines available to support clinical interventions for methamphetamine use disorders and identify gaps and strategies to inform future development in this area. This report presents the projects' key findings.

1.1 Methamphetamine Use in Australia

There is widespread concern in Australia regarding increased use of methamphetamine, particularly the potent crystalline form of the drug known as 'ice'. A wide range of problems and harms associated with crystal methamphetamine use have been identified (Goldsmid et al., 2017).

Australia's National Ice Action Strategy (2015) (Department of Prime Minister and Cabinet, 2015) highlighted five priority areas for action:

1. Support for families and communities
2. Targeted prevention
3. Investment in treatment and workforce
4. Focused law enforcement
5. Better research and data.

The present examination of clinical guidelines is intended to support the Strategy by identifying gaps in resources to support the workforce, how these gaps could be addressed and where further research may be required to support future guideline development.

1.1.1 Prevalence and harms

While prevalence of recent methamphetamine use at the general population level decreased significantly between 2013 and 2016 (from 2.1% to 1.4%) (AIHW, 2017), the proportion of people using crystal methamphetamine (i.e., 'ice') had already increased significantly between 2010 and 2013; with crystal methamphetamine displacing powder as the preferred form of the drug (AIHW, 2017).

Methamphetamine-related harm, including deaths[2] and demand for treatment, has increased as a result of the shift to the crystallised form of methamphetamine.

An elevated risk of harm exists among population groups with a high prevalence of use and/or disproportionate vulnerability relative to their use level. These groups include young people aged 20-29, regional and rural communities, Indigenous communities, and lesbian, gay, bi-sexual, transgender, intersex and queer (LGBTIQ) communities (Goldsmid et al., 2017; AIHW, 2017; Roche et al., 2015).

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[2] In 2016 the death rate from psychostimulants with abuse potential, including methamphetamine, was four times higher than in 1999 (ABS, 2017).

For example:

- **Aboriginal and Torres Strait Islander:** populations are 2.2 times more likely to use methamphetamine than non-Indigenous Australians (AIHW, 2017)
- **Regional and rural Australians:** lifetime and recent methamphetamine and recent crystal methamphetamine use is significantly higher among rural Australians compared with those living in major cities (Roche and McEntee, 2017). Similarly, the National Drug Strategy Household Survey found those living in remote/very remote areas were 2.5 times more likely to use methamphetamine than Australians living in major cities (AIHW, 2017)
- **LGBTIQ communities:** use of methamphetamine was 5.8 times higher in Australian homosexual and bisexual populations than among heterosexual people (AIHW, 2017). Lea et al. (2016) found that amongst bi-sexual men, rates of both crystal methamphetamine and speed use were consistently higher than among heterosexual groups
- **Young people:** Degenhardt et al. (2016) reported increases over the past 12 years in the numbers of regular and dependent methamphetamine users in Australia, an increase which has been most marked among young adults (i.e., those aged 15-34 years). Data from the NDSHS (2016) also indicate that the highest rates of methamphetamine use are found amongst those aged 20-29 (AIHW, 2017).

1.1.2 Treatment settings

Methamphetamine use can lead to complex physical, mental health and social problems. The role of treatment and other interventions is crucial in addressing methamphetamine-related problems. In Australia, publicly funded treatment episodes where the primary drug problem was meth/ amphetamine use doubled between 2011 and 2016 (AIHW, 2018).

Treatment for methamphetamine-related problems occurs in a diverse array of settings, including hospitals, Alcohol and Other Drug (AOD) specialist services, primary and community care and correctional services; and involves a wide range of health and human services professionals. Emergency department staff, nurses, general practitioners, AOD workers, police, social workers and psychologists may all be pivotally involved with different types of problem presentations and at different levels of problem severity.

It is recognised that these different professional groups and the various settings in which they work require appropriate evidence-based support tools and clinical guidelines.

1.2 Role of Clinical Guidelines

Clinical guidelines inform individual workers' practice and the treatment services available to people with methamphetamine-related health problems. High quality and appropriately targeted clinical guidelines are essential to ensure safe, effective, evidence-based and evidence-informed treatment and service delivery.

1.3 Defining Clinical Guidelines

The Institute of Medicine (IOM, 2011) defined clinical guidelines as:

> "statements that include recommendations, intended to optimize patient care, that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options."

This definition, if strictly applied, would have excluded many guidelines from this review. This, in turn, would have led to a less comprehensive overview of resources currently available. Instead, clinical guidelines that possessed at least some of requisite features identified in the IOM definition were included.

2. METHOD

The project comprised four components:

1. Identifying Australian methamphetamine clinical guidelines
2. Mapping treatment settings and populations covered
3. Assessing guidelines against contemporary guideline criteria
4. Identifying gaps and implications for future guideline development.

2.1 Identifying Australian Methamphetamine Clinical Guidelines

2.1.1 Search strategy

A comprehensive Internet search for Australian methamphetamine clinical guidelines was undertaken (see Appendix A for details).

2.1.2 Inclusion criteria

Guidelines that met the following criteria were included in the review:

- Produced in Australia after 2000
- Specifically addressed methamphetamine, in full or in part
- Were produced for health and welfare professional groups (e.g., medical officers, nurses, pharmacists, Indigenous alcohol and other drug workers)
- Were publicly available.

The full references for included guidelines, with brief descriptions of their content, are provided in Appendix B.

The following were excluded:

- Australian reference materials (see Appendix C)
- Clinical guidelines produced for audiences outside of Australia (due to the differences in service delivery models) (see Appendix D).

2.2 Mapping Treatment Settings and Populations Covered

A purpose-developed analytic framework (see **Table 2**) was used to map each guideline according to the treatment setting and population addressed[3].

Table 2 - Analytic Framework

Treatment Setting	Population Group Addressed							
	Generic	Young People	Rural & Remote	Aboriginal	LGBTIQ[a]	Families & Children	Perinatal	Other[b]
AOD Specialist								
Outreach Counselling services At-home withdrawal Withdrawal Service Residential rehabilitation Other/not specified								
Hospital								
Emergency department General ward Perinatal Mental health AOD withdrawal (inpatient) Other/not specified								
Primary and Community Care								
General practice Mental health Other/not specified								
Telephone/Online								
Corrections								
Not Defined								

[a] Lesbian, gay, bi-sexual, trans-gender, intersex, queer.
[b] For example, culturally and linguistically diverse, mental health, coerced

The guidelines were mapped against treatment settings and population groups by KR, JF & RN, and confirmed through group consensus.

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[3] Population categories were adapted from groups identified at particular risk of methamphetamine-related harm in the Final Report of the National Ice Task Force (Department of Prime Minister and Cabinet, 2015).

2.3 Guideline Appraisals

Identified guidelines were assessed for concordance with contemporary standards for clinical guidelines. To assess for concordance, an NCETA-modified version of the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument (Brouwers et al., 2010) was used. The AGREE is an international tool designed to assist the development of methodologically rigorous and transparent guidelines (see Appendix D for further information).

The AGREE appraisals identified a range of gaps in the processes used to develop and present the currently available guidelines and provided valuable pointers to recommended approaches to future guideline development.

The NCETA-modified instrument comprised 22 items organised within five domains:

1. Process of development (7 items)
2. Presentation style (3 items)
3. Completeness of reporting (6 items)
4. Clinical validity (3 items)
5. Quality & utility (3 items).

All items were scored on a 7-point scale (1 = lowest level of concordance with AGREE criteria and 7 = highest). A non-applicable option allowed items to be omitted from the scoring procedures. Scores were obtained for each domain and overall and transformed into total scores out of 100 (see Appendix E).

Guidelines with appraisal scores >70% met the concordance threshold level of the AGREE criteria recommended by Brouwers et al. (2010).

Scores for the 'process of development' domain consistently fell below 50%, hence overall scores were recalculated excluding that domain.

Appraisal assessments were undertaken by three assessors (KR, JF & RN) (unless otherwise indicated) with divergent views resolved by consensus.

2.4 Gaps and Implications for Future Guideline Development

Findings were synthesised to inform the gap analysis and recommendations for future guideline development. Treatment settings and population groups not addressed by existing guidelines or provided limited/incomplete coverage were identified, together with ways in which future guideline development processes could be enhanced.

3. KEY FINDINGS

3.1 Identified Clinical Guidelines

Twenty-seven methamphetamine-related clinical guidelines were identified (see **Table 3**). Some guidelines solely addressed methamphetamine (or stimulants) specifically, while others were generic but contained component parts of relevance.

3.2 Guideline Concordance with AGREE Criteria

Guideline appraisal scores for each AGREE domain were:

- *Process of development:*   none scored >70%
- *Presentation style:*   24 scored >70%
- *Completeness of reporting:* 3 scored >70%
- *Clinical validity:*   23 scored >70%
- *Quality and utility:*   19 scored >70%.

Methamphetamine-related clinical guidelines that scored >70% in their overall appraisal are identified with an asterisk (*) in **Table 3**. Overall, most guidelines were well organised and well written. Presentation styles generally produced clear, specific and unambiguous guidelines with easily identified recommendations. However, most guidelines did not accord with AGREE quality assessment criteria in relation to:

- How they were developed. It was often unclear whether they had been developed following a systematic review of available literature. Most guidelines also relied on the work of a few authors and/or used other guidelines as their basis.
- Consumer and/or target group involvement. Most guidelines did not report whether the views of target clinicians/workers or patients/public had been incorporated into guideline development.

While these features do not necessarily impact the overall clinical utility of the guidelines, they can make it difficult to assess whether the guidelines:

- Are consistent with the available evidence
- Accord with the consensus views of relevant groups.

A small number of guidelines used stigmatising and judgemental language that could undermine effective therapeutic relationships between patients and care providers.

3.3 Guideline Content

3.3.1 Assessing guideline coverage

The guidelines were mapped against the treatment settings and population groups they addressed (see **Table 4**).

In identifying coverage gaps in the available guidelines, it is important to be mindful that it is not necessarily practical (or desirable) to have guidelines available for every population group in every treatment setting. In addition, many of the guidelines included in the:

- *Other/not specified* treatment setting category could be valuable in treatment settings for which gaps currently exist
- *Generic* population category would have utility in the population categories for which gaps currently exist.[4]

For AOD specialist treatment settings, guidelines had most commonly been developed for withdrawal settings. AOD specialist treatment setting guidelines tended to be written with general and perinatal populations in mind. One methamphetamine-related clinical guideline (No. 7) addressed at-home withdrawal for rural and remote populations, while another guideline (No. 11) addressed perinatal concerns in all AOD specialist treatment settings.

For each hospital treatment setting included in the framework there was at least one methamphetamine-related clinical guideline. Clinical guidelines most commonly addressed the generic or perinatal population groups. One methamphetamine-related clinical guideline (No. 7) addressed at-home withdrawal for rural and remote populations, while another (No. 11) addressed the perinatal population group in all settings.

Methamphetamine-related clinical guidelines have been written for general practice, mental health, and a range of unspecified primary care settings. All primary care methamphetamine-related clinical guidelines most commonly addressed generic population concerns. However, one general practice treatment setting guideline addressed families and children (No. 16), a mental health guideline addressed perinatal populations (No. 11) whilst an unspecified primary care treatment setting guideline addressed rural and remote and Aboriginal population groups (No. 25; Aboriginal only: No. 6).

The treatment setting was not defined in 12 guidelines, eight of which addressed generic methamphetamine-related concerns. Five of the 12 guidelines addressed young people and perinatal population groups. Four addressed children and families, whilst two each addressed Aboriginal and LGBTIQ populations. One guideline addressed rural and remote population groups.

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[4] For example, Grigg J., Manning V., Arunogiri S., et al. (2018). Methamphetamine Treatment Guidelines: Practice Guidelines for Health Professionals (Second Edition). Richmond, Victoria: Turning Point.

Table 3 - Identified methamphetamine-related Clinical Guidelines

No.	Methamphetamine-related Clinical Guideline
1*	Baker, A., Kay-Lambkin, F., Lee, N.K., et al. (2003). A brief cognitive behavioural intervention for regular amphetamine users. Canberra: Department of Health and Ageing.
2*	Baker, A., Lee, N.K., & Jenner, L. (2004). Models of intervention and care for psychostimulant users. National Drug Strategy Monograph Series No. 51. Canberra: Department of Health and Ageing.
3*	De Crespigny, C. & Talmet, J. Eds. (2012). Alcohol, tobacco and other drugs: Clinical guidelines for nurses and midwives. Adelaide, South Australia: The University of Adelaide School of Nursing and Drug and Alcohol Services South Australia.
4*	Jenner, L. & Lee, N. (2008). Treatment approaches for users of methamphetamine: a practical guide for frontline workers. Canberra: Department of Health.
5*	Jenner, L., Spain, D., Whyte, I., & Baker, A. (2006). Management of patients with psychostimulant toxicity: Guidelines for emergency departments. Canberra: Department of Health and Ageing.
6*	Lee, K., Freeburn, B., Ella, S., et al. (2012). Handbook for Aboriginal alcohol and drug work. Sydney: University of Sydney.
7*	Grigg J., Manning V., Arunogiri S., et al. (2018). Methamphetamine Treatment Guidelines: Practice Guidelines for Health Professionals (Second Edition). Richmond, Victoria: Turning Point.
8*	Manning, V., Arunogiri, S., Frei, M.R., et al. (2018). Alcohol and other drug withdrawal: Practice guidelines. Richmond, Victoria, Turning Point.
9*	Stone, J., Bennetts, A Cleary, et al. (2019). Counselling guidelines: Alcohol and drug issues. Perth: Western Australian Mental Health Commission.
10*	Mental Health Alcohol and other Drugs Directorate (2012). Queensland alcohol and drug withdrawal clinical practice guidelines. Brisbane: QLD Health.
11*	NSW Ministry of Health (2014). Clinical guidelines: For the management of substance use during pregnancy, birth and the postnatal period. North Sydney: NSW Ministry of Health.
12*	SA Health (2017). Management of acute presentations related to methamphetamine use: Clinical guidelines for adults and adolescents. Adelaide: SA Health.
13*	Smout, M. (2008). Psychotherapy of methamphetamine dependence: Treatment manual. Adelaide: Drug and Alcohol Services South Australia (DASSA).
14*	Smout, M. S., Krasnikow, S., Longo, M., et al. (2015). QUICKFIX: Identify and intervene in psychostimulant use in primary health care. Adelaide: Drug and Alcohol Services South Australia.
15*	St Vincent's Hospital Melbourne, NEXUS and VDDI (2014). Guidelines for the acute assessment and management of methamphetamine-type stimulant intoxication and toxicity. Melbourne: St Vincent's Hospital Melbourne.
16	Australian General Practice Network (2007). Management of patients with psychostimulant use problems – guidelines for general practitioners. Canberra: Department of Health and Ageing.
17	Cementon, E. (2011). Alcohol and other drug withdrawal practice guidelines: Acute inpatient and residential services. Melbourne: Substance Use and Mental Illness Treatment Team, North Western Mental Health.
18	Drug and Alcohol Clinical Advisory Service (2011). Fact Sheet - Management of stimulant use. Melbourne, Victoria: Drug and Alcohol Clinical Advisory Service.
19	Insight Clinical Support Services (2016). Psychostimulant early intervention flow chart: combined. Brisbane: QLD Health.
20	Jenner, L., & Lee, N. K. (2008). Responding to challenging situations related to the use of psychostimulants: A practical guide for frontline workers. Canberra: Department of Health and Ageing.
21	Mental Health and Drug and Alcohol Office (2008). Drug and alcohol psychosocial interventions professional practice guidelines. Sydney: Ministry of Health, New South Wales.
22	Mental Health and Drug and Alcohol Office (2008). Drug and alcohol withdrawal clinical practice guidelines - New South Wales. Sydney: Mental Health and Drug and Alcohol Office.
23	National Centre for Education and Training on Addiction Consortium (2004). Alcohol and other drugs: a handbook for health professionals. Canberra: Department of Health and Ageing.
24	New South Wales Health (2007). Clinical guidelines for nursing and midwifery practice in NSW: Identifying and responding to drug and alcohol issues. North Sydney: NSW Department of Health.
25	Remote Primary Health Care Manuals (2017). CARPA standard treatment manual. Alice Springs: Northern Territory, Centre for Remote Health.
26	Royal Women's Hospital (2017). Drug and Alcohol - Management of Methamphetamine Dependence in Pregnancy. Parkville, Victoria: The Royal Women's Hospital.
27	Sydney South West Area Drug Health Services (2015). Clinical guidelines for assessment and management of psychostimulant users. Sydney: NSW Health.

* scored >70% on the AGREE overall quality appraisal

Table 4 - Treatment settings and population groups addressed by methamphetamine-related clinical guidelines[†].

Treatment Setting	Population Group Addressed							
	Generic	Young People	Rural & Remote	Aboriginal	LGBTIQ[a]	Families & Children	Perinatal	Other[b]
AOD Specialist								
Outreach	21 22						11	
Counselling services	21 22						11	
At-home withdrawal	7 10 17 21 22		7				11	
Withdrawal service	7 10 17 21 22						11	
Residential rehabilitation	7 21						11	
Other/not specified	12 21						11	
Hospital								
Emergency department	3 5 12 15 22	12					11	
General ward	22						11	
Perinatal							3 11 26	
Mental health	10 22						11	
AOD withdrawal (inpatient)	7 10 17 22		7				11	
Other/not specified	3 7 15 22						11	
Primary and Community Care								
General practice	10 14 16 18					16		
Mental health	3 10						11	
Other/not specified	3 10		25	6 25				
Telephone/Online								
Corrections	10						11	
Not defined	1 13 14 19 20 23 24 27	2 4 7 8 21	21	4 21	7 21	4 7 8 21	2 4 7 8 21	4 7 8 21

†Numbers correspond to the guidelines listed in Table 3.

[a] lesbian, gay, bi-sexual, trans-gender, intersex, queer;

[b] for example, non-English speaking background, mental health, coerced

The gap analysis identified several treatment settings and population groups where opportunities exist to enhance guideline coverage.

3.3.2 Treatment setting gaps

While several guidelines provide evidence informed generic guidelines that would have applicability in a range of settings,[5] no guidelines were found that directly supported telephone / online settings. Coverage was also limited for general hospital wards and correctional settings.

The results presented in **Table 4** are discussed in more detail below.

3.3.3 Population group gaps

Of all population groups, LGBTIQ populations had the least number of clinical guidelines (n=2) that had been developed to meet their specific needs. For both guidelines, the treatment setting was not specified, meaning that this population group had large gaps across treatment settings.

The needs of Aboriginal populations were addressed in four guidelines; of these, two were for undefined treatment settings and two were for unspecified primary health care settings. There were gaps in guidelines designed for hospital, AOD specialist service, telephone / online and correctional settings.

Rural and remote populations were also not well served by current guidelines. Only four guidelines addressed the specific needs of rural populations; of these 2 focussed on withdrawal settings (hospital inpatient and at home), one was for unspecified treatment settings and one for an unspecified primary care setting.

3.4 Future Guideline Development

3.4.1 Potential process enhancements for future guideline development

It is recommended that the AGREE Framework (or other guideline development standard as recommended by the National Health and Medical Research Council) is used to shape the development of future guidelines to address methamphetamine and other emerging drugs.

The AGREE Framework is highly regarded and is likely to provide an appropriate level of transparency concerning the extent to which guidelines:

- Are evidence-based
- Represent the consensus views of key stakeholders.

Guidelines examined here were not developed in accordance with the AGREE Framework as many pre-dated its availability. A high degree of concordance with AGREE criteria could

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[5] For example, Grigg J., Manning V., Arunogiri S., et al. (2018). Methamphetamine Treatment Guidelines: Practice Guidelines for Health Professionals (Second Edition). Richmond, Victoria: Turning Point.

not therefore be expected. While many of these guidelines have considerable clinical utility, future guideline development would be enhanced by a greater degree of concordance with AGREE criteria, or similar standards.

The use of the AGREE Framework is likely to bring to light gaps in available evidence to support guideline development. In this guideline examination, it became apparent that the evidence base to support methamphetamine treatment was not strong. In addition, it was often difficult to ascertain the extent to which guidelines were evidence based, or to determine the quality of evidence that informed them. It is critically important that identified evidence gaps inform the future research agendas in this area to ensure that practitioners have access to guidelines with robust links to sound evidence.

3.4.2 Priority treatment settings for inclusion in future guidelines

The treatment settings not adequately covered by the current methamphetamine related clinical guidelines were:

- Telephone/online
- Corrections
- General hospital wards.

3.4.3 Priority population groups for inclusion in future guidelines

LGBTIQ and Aboriginal populations are the top priorities for future guideline development. These groups are closely followed by rural and remote populations.

3.4.4 How should future guidelines be structured?

It is critically important that clinicians have access to guidelines that address the methamphetamine treatment settings and population groups identified in this review.

The challenge will be to develop guidelines which contain broadly applicable core information with sufficient supplementary information to allow them to be adapted to individual population groups and treatment settings.

While busy clinicians require a "how to" resource, they also need the capacity to refer back to source research if need be.

Attempting to achieve this in a single document or online resource is likely to result in a very large / lengthy resource which may be inaccessible for busy clinicians. For example, the National Guidelines for Medication-Assisted Treatment of Opioid Dependence (Gowing et al., 2014), while very comprehensive, it is over 200 pages long.

It is therefore recommended that future guidelines comprise two components:

1. Desktop resource: A concise document that provides guidance for busy frontline clinicians which addresses each of the treatment areas and briefly addresses the needs of all population groups.

2   Bookshelf resource: A comprehensive companion document that details the guideline development process. This should include:

- A systematic literature review of the evidence base
- Coverage of all main treatment approaches
- Detailed implications for each of the population groups.

4. DISCUSSION AND CONCLUSION

Australia has produced a substantial number of good quality methamphetamine-related clinical guidelines. Most guidelines are useful resources with valuable clinical utility and serve the needs of a wide range of treatment settings and population groups. There are however gaps and limitations in the guidelines currently available and there is scope for the production of a comprehensive guideline to inform consistent quality practice nationally.

The current guidelines largely pre-date the emergence of NHMRC, or similar gold standards to inform the development of high-quality clinical guidelines. Moreover, there is a relatively limited evidence base available to inform methamphetamine-related clinical guidelines. The current review highlights the pressing need for further clinical research to be undertaken to build the evidence-base required for future guidelines.

Important gaps in the extant guidelines were identified in both the coverage of specific treatment settings and particular population groups. In terms of treatment settings, guidelines relevant to telephone / online settings general hospital wards and correctional settings warrant future attention. In terms of population groups, LGBTIQ and Aboriginal people are the top priorities for future guideline development. These groups are closely followed by rural and remote populations.

In moving towards the future development of high-quality guidelines, it is imperative that they are written in non-stigmatising, non-judgemental language. This is central to fostering effective therapeutic relationships between patients and care providers and for achieving positive treatment outcomes.

It is possible that some clinical guidelines were inadvertently missed in this review. In addition, assessing the guidelines in terms of their AGREE scores and coverage of treatment settings and populations is by necessity a subjective process. Nevertheless, using three independent assessors minimised risk of significant scoring variations.

The tool used to assess the guidelines was an NCETA-modified version of the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument (Brouwers et al., 2010). There was a variable degree of concordance with the AGREE criteria. This is unsurprising given that the guidelines were not developed with the AGREE criteria in mind.

It is recommended that the AGREE tool (or a similar replacement) should be the benchmark to inform the development of future guidelines.

At the time that this project was conducted, the NHMRC was working with an Expert Advisory Committee to develop a new online resource for guideline developers that will supersede its current Standards. This new resource will be published in self-contained modules on the NHMRC 'Guidelines for Guidelines' website.

While NHMRC-led advances in guideline development should inform future work in this area, it is important to note that NHMRC frameworks and approaches to guideline development address issues well beyond clinical practice. As such, they may not be a 'perfect fit' for the development of future methamphetamine-related clinical guidelines.

Nonetheless, ensuring that future methamphetamine-related guidelines reflect NHMRC standards will likely produce stronger, more reliable and evidence-based clinical support tools.

REFERENCES

Australian Bureau of Statistics. (2017). *3303.0 - Causes of Death, Australia, 2016.* Canberra: Australian Bureau of Statistics.

Australian Institute of Health and Welfare. (2017). *National Drug Strategy Household Survey 2016: detailed findings.* (Drug Statistics series no. 31.). Canberra: Australian Institute of Health and Welfare.

Brouwers, M., Kerkvliet, K., Spithoff, K., on behalf of the AGREE Next Steps Consortium. (2016). The AGREE Reporting Checklist: a tool to improve reporting of clinical practice guidelines. *British Medical Journal, 352,* i1152

Brouwers, M., Kho, M., Browman, G., Burgers, S., Cluzeau, F., Feder, G., . . . Hanna, S. (2012). The global rating scale complements the AGREE II in advancing the quality of practice guidelines. *Journal of Clinical Epidemiology, 65*(5), 526-534.

Brouwers, M., Kho, M., Browman, G., Burgers, S., Cluzeau, F., Feder, G., . . . for the AGREE Next Steps Consortium. (2010). AGREE II: Advancing guideline development, reporting and evaluation in healthcare. *Canadian Medical Association Journal, 182*(18), E839-E842.

Commonwealth of Australia, Department of the Prime Minister and Cabinet. (2015). *National Ice Action Strategy 2015.* Canberra: Department of the Prime Minister and Cabinet.

Degenhardt, L., Larney, S., Chan, G., Dobbins, T., Weier, M., Roxburgh, A., . . . McKetin, R. (2016). Estimating the number of regular and dependent methamphetamine users in Australia, 2002-2014. *Medical Journal of Australia, 204*(4), e1-1. e6.

Dawe, S., Atkinson, J., Evans. B., Lynch, M., Derran, M., Harnett, P. (2006). Drug use in the family impacts and implications for children. Canberra: Australian National Council on Drugs.

Department of the Prime Minister and Cabinet. (2015). *Final Report of the National Ice Taskforce.* Canberra: Commonwealth of Australia.

Goldsmid, S., Johnston, I., Kapira, M., Claydon, C., Petricevic, M., & Webber, K. (2017). *Australian methamphetamine user outcomes.* (Statistical Bulletin 03). Canberra: Australian Government.

Gowing, L., Ali, R., Dunlop, A., Farrell, M., & Lintzeris, N. (2014). *National guidelines for medication-assisted treatment of opioid dependence.* Canberra: Commonwealth of Australia, 38-9.

Institute of Medicine. (2011). *Clinical practice guidelines we can trust.* Washington, DC: The National Academies Press.

Lea, T., Mao, L., Hopwood, M., Prestage, G., Zablotska, I., de Wit, J., & Holt, M. (2016). Methamphetamine use among gay and bisexual men in Australia: trends in recent and regular use from the Gay Community Periodic Surveys. *International Journal of Drug Policy, 29*, 66-72.

National Health and Medical Research Council. (2011). *Procedures and requirements for meeting the 2011 NHMRC standard for clinical practice guidelines.* Canberra: National Health and Medical Research Council.

Roche, A., & McEntee, A. (2017). Ice and the outback: patterns and prevalence of methamphetamine use in rural Australia. *Australian Journal of Rural Health, 25*, 200-209.

Roche, A., McEntee, A., Fischer, J., & Kostadinov, V. (2015). *Methamphetamine use in Australia*. Adelaide: National Centre for Education and Training on Addiction, Flinders University.

Woolf, S. H., Grol, R., Hutchinson, A., Eccles, M., & Grimshaw, J. (1999). Potential benefits, limitations, and harms of clinical guidelines. *British Medical Journal, 318*(7182), 527-530.

APPENDICES

Appendix A: Review search strategy

The search for Australian methamphetamine clinical guidelines comprised the following activities:

- Google and Google Scholar searches using the following terms: clinical guidelines for methamphetamine, amphetamine type stimulants; clinical treatment guidelines to assist health and medical professionals treat people with alcohol and other drug problems; guidelines for the management of amphetamine misuse and dependence; psychostimulant guidelines; managing amphetamine intoxication
- An examination of the resources and guidelines for health professionals located in the *Cracks in the Ice* online toolkit
- An examination of the references and resources in NCETA's online resource *Ice: Training for Frontline Workers,* cross-checked with the list of resources and references from NCETA's 2015 National Methamphetamine Symposium
- An examination of policies and procedures located on:
  - The Australian Government Department of Health's website – using the following search terms: guidelines, amphetamine, amphetamine-type, methamphetamine, psychostimulant
  - All state and territory Health Department and AOD government services websites using the following search terms: guidelines, methamphetamine, amphetamine, psychostimulants
  - An examination of references and resources on the Indigenous AOD Knowledge Centre website using the following search terms: guidelines, methamphetamine, amphetamine, psychostimulants.

Appendix B: Full list of methamphetamine-related clinical guidelines

	Full Guideline Citation	Focus	Description
1	Baker, A., Kay-Lambkin, F., Lee, N., Claire, M., & Jenner, L. (2003). *A brief cognitive behavioural intervention for regular amphetamine users.* Canberra: Australian Government Department of Health and Ageing.	CBT Treatment	This is a project evaluating the effectiveness of two and four session cognitive behavioural interventions developed specifically for people who use amphetamines. Context and background into how the study was developed are included in section 1 and 2. Guidelines for how to use the intervention and tools to apply the intervention are provided in section 3 and 4. This is a systematic study.
2	Baker, A., Lee, N. K., & Jenner, L. (2004). Models of intervention and care for psychostimulant users *National Drug Strategy* Monograph Series No. 51 (2 ed.). Canberra.	Withdrawal and clinical interventions Australia-wide	This is a 270 page document. It includes 3 main sections and is part of an Australian Government Department of Health and Ageing monograph series. The introduction, provides background to the Monograph. Section 2, discusses prevalence effects and risks. Section 3 provides clinical considerations. Information on amphetamines is embedded throughout the entire document, mostly under the broader heading of psychostimulants. The systematic review methods for developing the guidelines are included.
3	de Crespigny, C., & Talmet, J. (Eds.). (2012). *Alcohol, tobacco and other drugs: clinical guidelines for nurses and midwives* (3 ed.). Adelaide, South Australia: The University of Adelaide School of Nursing & Drug and Alcohol Services South Australia.	Nurses and Midwives SA	This is a 427 page guideline is an SA Health document developed for nurses and midwives. Psychostimulants are covered in section 3.3.2 (p. 262). Methamphetamine is covered in section 3.4.5 (p. 299). There is a table titled symptoms and effects of drugs, which includes amphetamines on page 66. Table 6, (p. 94) has a table called harm and risk of withdrawal for drug use during pregnancy. Amphetamine withdrawal assessment charts are included in the Appendix section. These guidelines aim to provide a benchmark for quality intervention assessment and referral by nurses.
4	Jenner, L., & Lee, N. (2008). Treatment approaches for users of methamphetamine: a practical guide for frontline workers. Canberra: Australian Government Department of Health.	Frontline workers Australia-wide	This is a 115 page document, published by the National Drug Strategy. It was based on contemporary research at the time, national and international guidelines and expert opinion. There are 11 chapters and a summary of the important aspects of each chapter. Chapter 1, provides a background to methamphetamine. Chapter 2 describes the effects, risks and harms as well as harm reduction strategies. Chapter 3 provides information on recognising and managing intoxication. Chapter 4 provides information on how to recognise

	Full Guideline Citation	Focus	Description
			and manage an overdose. Chapter 5 discusses managing mental health problems. Chapter 6 concerns supporting a person though withdrawal. Chapter 7 provides poly drug use information. Chapter 8 addresses treatment options. Chapter 9 provides guidance for families and carers. Chapter 10 addresses legal issues and Chapter 11 concerns community partnerships. A systematic review and methodology is not included.
5	Jenner, L., Spain, D., Whyte, I., & Baker, A. (2006). *Management of patients with psychostimulant toxicity: guidelines for emergency departments.* Canberra: Australian Government Department of Health and Ageing.	Emergency Departments Australia-wide	This is a 37 page document. The document states its purpose is to provide draft guidelines to emergency departments in Australia. The key words methamphetamine and psychostimulants are consistently used though the entire document. There are six main sections. 1. Background, introducing the purpose of the study to provide draft guidelines to emergency departments in Australia. 2. Introduction, which includes patterns of psychostimulant use and toxicity. 3. Draft guidelines which include the role of emergency departments, assessment and diagnosis. 4. Management which refers to responding to behavioural disturbances and sedative protocols. A systematic review and methodology section is not included.
6	Lee, K., Freeburn, B., Ella, S., Miller, W., Perry, J., & Conigrave, K. (2012). Handbook for Aboriginal alcohol and drug work. Sydney: University of Sydney.	Aboriginal Health Workers NSW	This is a 464 page handbook with 17 chapters. The Handbook covers different types of substance use. Stimulants are covered in chapter 6 (p.159). Polydrug use is addressed in chapter 10 (p.237). Methamphetamine is also discussed in the general principles section on page 7.
7	Grigg J., Manning V., Arunogiri S., Volpe I., Frei M., Phan V., Rubenis A., Dias S., Petrie M., Sharkey M. & Lubman D. I. (2018). Methamphetamine Treatment Guidelines: Practice Guidelines for Health Professionals (Second Edition). Richmond, Victoria: Turning Point.	Variety of Practitioners VIC	This is a 143 page clinical guideline document published by the Turning Point Alcohol and Other Drug Centre. There are 4 main sections. 1. Introduction, which describes amphetamine, and related harms, dependence withdrawal and mental health. 2. Principles of treatment. 3. Treatment modalities and settings 4. Practice guidelines 5. Future directions and conclusion. Key words methamphetamine and psychostimulants are embedded throughout the document.
8	Manning, V., Arunogiri, S., Frei, M. R., K., Mroz, K., Campbell, S., & Lubman, D. (2018).	Variety of Practitioners	This is a 132 page clinical guideline document published by Turning Point Drug and Alcohol Centre. It contains 18 sections. Section 15 (p. 151) is dedicated to psychostimulants. Amphetamine type stimulants are included in the withdrawal

	Full Guideline Citation	Focus	Description
	Alcohol and other drug withdrawal: practice guidelines. Richmond, Victoria: Turning Point.	VIC	table on page 15 and the complex withdrawal table on page 16. Methamphetamine is also discussed in section 9. Special populations in regard to poly drug use (9.1 p.39) co-occurring disorders (9.3 p. 40) and ATSI population (9.6 p. 52) are all highlighted. Methamphetamine synthetic cathinone and serotonin syndrome are discussed in section 16.3 (p. 79). No systematic review or methodology is provided.
9	Stone, J., Bennetts, A., Cleary, L., Ditchburn, S., Jacobson, H., Rea, R., Aitken, D., Lowery, M., Oh, G., Stark, R., Stevens, C. (2019). *Counselling guidelines: Alcohol and drug issues. Fourth Edition.* Perth: Western Australian Alcohol and Drug Authority.	Counselling

WA | This is a 322 page counselling guideline document with This edition is divided into six sections, as follows: Setting the scene; Professional practice; AOD knowledge and skills; Assessment and treatment planning: Counselling interventions; and Working with specific issues. The resource has 55 topics. Amphetamines are explicitly mentioned throughout the document. No systematic review or methodology is provided. |
| 10 | Mental Health Alcohol and Other Drugs Directorate. (2012). *Queensland alcohol and drug withdrawal clinical practice guidelines.* Brisbane: Queensland Health. | Withdrawal

QLD | This is a 128 page clinical guideline document. There are 8 main sections, section 7 (p. 62) specifically relates to psychostimulants. Section 2 (p. 10) general principles of withdrawal management also applies to amphetamines and they are included in a table on page 11 which describes the street names and prices of drugs. No systematic review or methodology is provided. |
| 11 | NSW Ministry of Health. (2014). Clinical guidelines for the management of substance use during pregnancy, birth and the postnatal period. North Sydney: NSW Ministry of Health. | Nursing and Midwifery

NSW | This is a 128 page clinical summary document with 21 sections. Amphetamines are mentioned explicitly in relation to breast feeding in section one. The document refers to substance use, in relation to supporting a woman though pregnancy, birth and the postnatal period. Information dedicated to Aboriginal and Torres strait islander people is included in section 11. No systematic review or methodology is provided. |
| 12 | SA Health. (2017). Management of acute presentations related to methamphetamine use: Clinical guideline for adults and adolescents. Adelaide: SA Health. | Adults and Adolescents

SA | This is an 18 page guideline document. There is a contents section and 11 sections. Acute behavioural disturbances, medical complications of methamphetamine use, methamphetamine withdrawal and methamphetamine psychosis topics are included. |

	Full Guideline Citation	Focus	Description
13	Smout, M. (2008). *Psychotherapy for methamphetamine dependence: treatment manual*. Adelaide, Drug and Alcohol Services South Australia (DASSA).	Clinicians SA	This is a 112 page document compromising 11 chapters, applying the ACT model of therapy to psychostimulant users.
14	Smout, M., Krasnikow, S., Longo, M., Wickes, W., Minniti, R., & Cahill, S. (2015). QUICKFIX: identify & intervene in psychostimulant use in primary health care. Adelaide: Drug and Alcohol Services South Australia.	Primary Health care workers, focusing on GPs SA	This is a 10 page document. The document contains a brief background and three levels of *quickfix*, screening, brief and full check.
15	St Vincent's Hospital Melbourne, NEXUS, & VDDI. (2014). Guidelines for the acute assessment and management of amphetamine-type stimulant intoxication and toxicity. Melbourne: St Vincent's Hospital Melbourne.	Emergency Department St Vincent Specific VIC	This is a 4 page document presented as tables. Table 1: Guideline for acute assessment and management of amphetamine type stimulant toxicity. Table 2: Management of acute behavioural disturbance due to amphetamine type stimulant intoxication. Table 3: Stages of change and matching interventions and long term management of amphetamine use and dependence.
16	Australian General Practice Network. (2007). *Management of patients with psychostimulant use problems – guidelines for general practitioners.* Canberra: Australian Government Department of Health and Ageing.	GPs Australia-wide	This is a 38 page document, formatted like a book. The document has four main sections. These are: background, guidelines, in a nutshell and references. The overall purpose is to provide Australian general practitioners with strategies to safely manage individuals who are experiencing problems related to psychostimulants. Psychostimulants are described on page vi. The role of general practitioners in assisting people who use psychostimulants is on page viii. This flows into a section on assessment and management. A decision tree flow chart is included on page 2. The DSM IV definition of substance dependence is located on page 5. There is a section on special considerations for amphetamine related psychosis (p. 11) behavioural disturbances (p. 12) and serotonin toxicity (p. 13). Information on whether a systematic methodology was used to develop the guidelines is not included. However, these guidelines are developed from *Models of intervention and care for psychostimulant users* described in row 2, below.

	Full Guideline Citation	Focus	Description
17	Cementon, E. (2011). *Alcohol and other drug withdrawal practice guidelines: acute inpatient and residential services.* Melbourne: Substance Use and Mental Illness Treatment Team, NorthWestern Mental Health.	Inpatient and Residential withdrawal North Western Mental Health, VIC	This is a 52 page guideline document developed for a specific organisation (NWMH). Amphetamines are discussed explicitly in section 3 (pp. 21-25). Withdrawal management processes are included in a table on page 7. Clinical support and information services are identified on page 40. No systematic review or methodology section is included.
18	Drug and Alcohol Clinical Advisory Service. (2011). *Fact Sheet: management of stimulant use.* Victoria: Drug and Alcohol Clinical Advisory Service.	GPs	This is a 2 page Fact Sheet for general practitioners and reads like a clinical guideline.
19	Insight Clinical Support Services. (2016). Psychostimulant early intervention flow chart: combined. Brisbane: Queensland Health.	Frontline workers QLD	This is a detailed one page flow chart. It identifies assessment strategies and questions to determine if the client should follow an acute or non-acute intoxication pathway. Included on the page but not in the flow diagram are medical investigations, information for dehydration, chest pain, hypertension, rhabdomyolysis, seizures and serotonin toxicity. Two separate versions are available showing the acute and non-acute pathways. See resources # 5-7.
20	Jenner, L., & Lee, K. (2008). Responding to challenging situations related to the use of psychostimulants: a practical guide for frontline workers. Canberra: Australian Government Department of Health and Ageing.	Front Line Workers, particularly those without a professional or clinical background	This is a 47 page document published by the Australian Government Department of Health and Ageing. This publication specifically concerns dealing with challenging behaviours exhibited by people who use methamphetamine. It is categorised into five main sections. 1. About challenging situations 2. Before, preventing and reducing the likelihood of a challenging situation 3. During, responding to challenging situations 4. After, recovery and review 5. Special considerations for specific service settings.
21	Mental Health and Drug and Alcohol Office. (2008a). *Drug and alcohol psychosocial interventions professional practice guidelines.* Sydney: Ministry of Health, New South Wales.	Psychosocial Interventions NSW	This is a 102 page clinical practice guideline document. Psychostimulants are discussed explicitly in section 7 pages 49-54. Section 2.3.5 (p. 7) has a table of street names that include amphetamines. Page 11, has a table describing the different forms of psychostimulants. Page 15 provides a table of illicit

	Full Guideline Citation	Focus	Description
			psychostimulants in Australia. No systematic review or methodology is provided.
22	Mental Health and Drug and Alcohol Office. (2008b). *Drug and alcohol withdrawal clinical practice guidelines* - *New South Wales.* Sydney: Ministry of Health, New South Wales.	Withdrawal NSW	This is a 102 page document. It states explicitly that it is a clinical guideline. There are eight main sections. Psychostimulants are discussed in section 7. Page 6 provides information on how to take a consumption history and page 7 highlights street names for drugs. Both sections highlight amphetamines. Page 11 includes a table of psychostimulants available in Australia. Section 2.3.10 (p. 13), contains information about selective withdrawal from amphetamines.
23	National Centre for Education and Training on Addiction (NCETA) Consortium. (2004). Alcohol and other drugs: a handbook for health professionals. Canberra: Australian Government Department of Health and Ageing.	Health Professionals Australia-wide	This is a five-part handbook. Part 1 provides an introduction. Part 2 discusses drugs, part 3 includes non-medical interventions. Part 4 raises special issues for consideration and part 5 is the appendix and glossary. Part 2, chapter 6 (p. 79) discusses amphetamines specifically. Management and intervention strategies are on page 85.
24	New South Wales Health. (2007). Clinical guidelines for nursing and midwifery practice in NSW: identifying and responding to drug and alcohol issues. North Sydney: NSW Department of Health.	Nursing and Midwifery NSW	This is a 114 page guideline document made up of 10 main sections Section 9.4 (p. 50) is for psychostimulant drugs, including a section on maternal health. Information on the effects and withdrawal of amphetamines are located on page 98. Amphetamines and pregnancy information is on page 99. Both of these are in section 9, screening tools. Amphetamines are raised in section 3.3 (p. 12). in the context of special Populations, co-occurring disorders and ATSI. Amphetamines are included in table 6.1 (p 24) which outlines symptoms and effects of specific drugs. A systematic review and methodology is not included.
25	Remote Primary Health Care Manuals. (2017). *CARPA standard treatment manual*. Alice Springs, Northern Territory: Centre for Remote Health.	Indigenous communities in Northern and Central Australia	This is a 148-page treatment manual is specific to remote practice. The manual development included an editorial group and primary and secondary reviewers. Mental health and drug problems are captured in section 3 (p. 191). Amphetamines are covered explicitly pages 214-217. An amphetamine withdrawal chart is included. Serotonin syndrome is discussed on page 204. The CARPA STM is not intended to be a comprehensive resource or a standalone manual. It is designed to be used with other remote primary health care manuals.

	Full Guideline Citation	Focus	Description
26	Royal Women's Hospital. (2017). *Drug and alcohol management of methamphetamine dependence in pregnancy.* Parkville, Victoria: The Royal Women's Hospital.	Nursing Midwifery/ WCH Hospital Specific VIC	This is an 8 page guideline document. It does not include a contents section. There are eight main sections. Four have the majority of the content. There is a flow chart on page 2 which is designed to assist with the management of patients who disclose amphetamine use during pregnancy.
27	Sydney South West Area Drug Health Services. (2015). *Clinical guidelines for assessment and management of psychostimulant users.* Sydney: New South Wales Health.	Medical	This is a 2 page guideline with brief information for assessment and management of psychostimulant users. Page 2 consists of a flowchart.

Appendix C: Other Australian methamphetamine-related resources

During the process of identifying clinical guidelines for methamphetamine use disorder for this project, a range of other methamphetamine-related resources were located. While these resources could not be regarded as clinical guidelines, they do contribute to the evidence base concerning effective responses to methamphetamine-related issues. For this reason, they have been listed below.

No.	Title	Focus	Description	Link
1.	Allsop, S. (2008). *Drug use and mental health: Effective responses to co-occurring drug and mental health problems.* (1st ed). East Hawthorn, Victoria: IP Communications.	AOD and Mental Health Co-Morbidity.	This is a published book with 21 chapters. It has a focus on people who use drugs and have co-occurring mental health problems. Amphetamine type stimulants and schizophrenia are discussed in chapter 21.	Book. No link available
2.	Allsop, S., & Lee, N. (2012). *Perspectives on amphetamine type stimulants.* East Hawthorn, Victoria: IP communications.	Amphetamine Type Stimulants and approaches to care	This is a book which includes an introduction to amphetamine type stimulants and influences on their actions and effects. The book includes consumer and front line worker perspectives and discusses evidence to inform responses to harm related to amphetamine type substances.	Book. No link available.
3.	Baker, A. (2015). *Physical and psychological effects of methamphetamine use.* Adelaide: National Centre for Education and Training on Addiction.	Research to practice	This is a 30 minute presentation about physical and psychological effects of methamphetamine by Amanda Baker. This was presented at the NCETA 2016 National Methamphetamine Symposium.	https://www.youtube.com/watch?v=2RY6G22uOn8&feature=youtu.be
4.	Dawe, S., Atkinson, J., Frye, S., Evans, C., Best, D., Lynch, M., Moss, D., & Harnett, P. (2006). *Drug use in the family impacts and implications for children.* Canberra: Australian National Council on Drugs.	Parental substance misuse and children between 2 and 12 years old.	This is a research paper focusing on drug use in the family context. There are nine chapters which include prevalence of use amongst parents and the impact this has on children. The impact in Indigenous communities is discussed along with policy and legal frameworks. Principles of best practice are also addressed. Responses to *Hidden Harm* in the UK is also included. Specific information on methamphetamine is included throughout the paper.	https://www.researchgate.net/publication/37358668_Drug_Use_in_the_Family_Impacts_and_Implications_for_Children

5.	Harland, J., & Ali, R. (2017). *ASSIST on ice: The Alcohol, Smoking and Substance Involvement Screening Test and brief intervention for methamphetamine use.* Adelaide: DASSA-WHO Collaborating Centre, University of Adelaide, Australia.	ASSIST Tool	This is a screening and brief intervention tool. Organisations can use this in conjunction with their preferred clinical guidelines.	https://cracksintheice.org.au/assist-on-ice-screening-tool
6.	Harney, A., MacLean, S., & Arabena, K. (2014). *Treatment guidelines, training and information resources about methamphetamine (ice) use for Victorian Aboriginal communities.* Melbourne: VicHealth Koori Health Unit, Centre for Health Equity, University of Melbourne.	Aboriginal and Torres Strait Islanders, AOD, health Professionals	This is a resource of guidelines concerning methamphetamine and its impacts on Indigenous people.	https://socialequity.unimelb.edu.au/__data/assets/pdf_file/0010/1979506/Resources-to-address-ice-use-in-Aboriginal-communities.pdf
7.	Insight Clinical Support Services (2016). *Meth Check: Ultra Brief Intervention Tool.* Brisbane: Queensland Health.	QLD front line workers	This is a brief intervention tool for health practitioners to do a 5 to 10-minute intervention.	https://insight.qld.edu.au/shop/meth-check-brief-intervention-tool
8.	Insight Clinical Support Services (2016). *Meth Check: Ultra-Brief Intervention Tool Aboriginal and Torres Strait Islander Version*. Brisbane: Queensland Health.	QLD front line workers	This is a brief intervention tool for health practitioners to use with Aboriginal or Torres Strait Islander populations. This is approximately a 5 to 10-minute intervention. .	https://insight.qld.edu.au/shop/aboriginal-&-torres-strait-isl&er-meth-check-ultra-brief-intervention-tool.
9.	Insight Clinical Support Services (2016). *Introduction to methamphetamine for Queensland Workers*. Brisbane: Queensland Health.	E learning tool Broad-Frontline workers	This is an online E learning tool which covers the Insight tools for working with methamphetamine.	https://insight.qld.edu.au/toolkits/meth-check/detail?events=elearning
10.	Insight Clinical Support Services (2016). *Psychostimulant early intervention flow chart: acute intoxication pathway*. Brisbane: Queensland Health.	Flow chart for acute intoxication.	This is a one-page flow chart for assessing whether a person is intoxicated with psychostimulants and appropriate responses. The combined document is included in the methamphetamine guidelines section.	https://insight.qld.edu.au/shop/psychostimulant-medical-early-intervention-flowchart-acute-intoxication-pathway

11.	Insight Clinical Support Services (2016). *Psychostimulant early intervention flowchart: No acute intoxication pathway.* Brisbane, Queensland Health.	Flow chart for no acute intoxication	This is a one-page management flow chart for patients who are not acutely intoxicated with methamphetamine. The combined document is included in the methamphetamine guidelines section.	https://insight.qld.edu.au/shop/psychostimulant-medical-early-intervention-flowchart-no-acute-intoxication-pathway
12.	National Centre for Education and Training on Addiction (2016). *Ice: Training for Front Line Workers.* Adelaide, SA: National Centre for Education and Training on Addiction.	Online training for front line workers	This is an online training program with seven independent but complementary modules. It provides information and resources for frontline workers.	https://nceta.androgogic.com.au/
13.	NSW Department of Health (2005). *Amphetamine, ecstasy and cocaine. A prevention and treatment plan 2005-2009.* Sydney: NSW Health.	Strategic	This is a framework designed to guide the health sector's response to the use of psychostimulants. It is a 34 page document with six sections. It addresses, patterns of use, aims and objectives, principles of the plan, education, prevention, treatment approaches, research, special populations and partnerships.	https://www.health.nsw.gov.au/mentalhealth/publications/Publications/amph-ecstasy-plan.pdf
14.	Gowing, L., & Holmwood, C. (2017). *Management of patients presenting with acute methamphetamine-related problems: Evidence summary.* Adelaide: Drug and Alcohol Services South Australia.	Evidence Summary. Acute care patients.	This is a 26 page evidence summary. It includes four chapters describing methamphetamine and its acute effects. Sedation to manage problematic behaviour is discussed. Psychosis and prognosis of amphetamine-induced psychosis is discussed and there is a section covering post-acute care.	https://www.sahealth.sa.gov.au/wps/wcm/connect/915c4c60-a766-414c-8606-94d1702d052f/Management+of+meth+presentations+-+evidence+summary+2017+final.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-915c4c60-a766-414c-8606-94d1702d052f-m1Dw8gz

15.	McIver, C., Flynn, J., Baigent, M., Vial, R., Newcombe, D., White, J., Ali, R. (2006). *Management of methamphetamine psychosis stage 2: Acute care interventions for the treatment of methamphetamine psychosis and assertive community care for the post-discharge treatment of methamphetamine psychosis.* Adelaide, SA: Drug and Alcohol Services South Australia.	Methamphetamine Psychosis	This is a research monograph dedicated to the management of methamphetamine psychosis. It is split into seven sections, introduction, literature review, methodology phase one and two, results phase one and two, results of assertive care as well as community care followed by Appendices and references.	https://www.sahealth.sa.gov.au/wps/wcm/connect/255129804f7898f6b39dfbc4163822ed/Monograph+21-DASSA-Feb2013.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-255129804f7898f6b39dfbc4163822ed-lAxAO3K
16.	Roche, A. (2015). *Methamphetamine: Effects and responses*. Adelaide, SA: National Centre for Education and Training on Addiction.	Broad-All	This is a four page resource which describes: methamphetamine and ice; who uses methamphetamine; immediate effects; coming down; potential harms; minimising harms; treatment and stigma.	http://nceta.flinders.edu.au/files/9014/3339/5938/EN597.pdf
17.	Uniting Care ReGeN. (2014). *Methamphetamine Treatment: Building in successful strategies to build outcomes.* Melbourne Victoria: Uniting Care ReGeN.	Program and Strategic	This is an eight page document created by the ReGen Uniting Care service. It provides background information on methamphetamine. It describes the ReGen experience of a stepped care clinical trial conducted to improve service delivery.	https://www.regen.org.au/images/Meth_Treatment_-_Building_on_successful_strategies_to_enhance_outcomes_v1.0.pdf

Appendix D: International methamphetamine-related resources

A range of international methamphetamine-related resources were identified during this project. These were not appraised in this review due to the differences in service delivery models. However, they do contribute to the evidence base concerning effective responses to methamphetamine-related issues. For this reason, they have been listed below.

No.	Title	Focus	Description	Link
1.	Clinical Guidelines on Drug Misuse and Dependence Update 2017 Independent Expert Working Group (2017). *Drug misuse and dependence: UK guidelines on clinical management*. London: Department of Health.	Healthcare professionals, providers and commissioners of treatment for people who misuse or are dependent on drugs. Professional and regulatory bodies. Service users and carers.	This is a 317 page document with 7 chapters; introduction, treatment provision, psycho social components of treatment, pharmacological interventions, criminal justice system, health, treatment situations and populations. Psychosocial interventions for amphetamines are included on page 48 in the introduction. Cocaine and other stimulants and behaviour change are discussed in section 3.7.3.1 on page 70. There is a section on stimulants in section 4.10.2, page 123. Management of stimulant withdrawal is discussed in section 5.4.6.8, page 173. Women, pregnancy and stimulants is located in section 7.6.10, page 223.	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/673978/clinical_guidelines_2017.pdf
2.	Gouzoulis-Mayfrank, E., Hartel-Petri, P., Hamdorf, W., Havemann-Reinecke, U., Muglig, S., Wodarz, N. (2017). Methamphetamine-related disorders. *Deutsches Arzteblatt*	Development of methamphetamine- related guidelines.	This is a 10 page document. The method section on page 4 states that it is a clinical guideline. This was developed following a systematic review. Treatment recommendations are included in the	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5523799/

	International. 114(26): 455-61; DOI: 10.3238/arztebl.2017.0455		section for acute treatment and post-acute therapy.	
3.	Matua Raki. (2010*). Interventions and treatment for problematic use of methamphetamine and other amphetamine-type stimulants.* Wellington: Ministry of Health.	Front line workers and specialist addiction practitioners.	This is an 82 page document The publication provides information on treatment needs, pharmacology, managing intoxication and assessment. It applies a Matrix model treatment package. The guideline provides a number of worksheet tools.	https://www.matuaraki.org.nz/uploads/files/resource-assets/interventions-and-treatment-for-problematic-use-of-methamphetamine-and-other-amphetamine-type-stimulants.pdf
4.	Matua Raki. (2010). *What's new in interventions and treatment for problematic use of methamphetamine and other amphetamine type stimulants.* Wellington: Ministry of Health.	Front line workers and specialist addiction practitioners.	This is a 13 page document. It is a review of the content of the guidelines and current developments in the treatment of problematic methamphetamine and other amphetamine-type stimulants.	https://www.health.govt.nz/system/files/documents/publications/whats-new-interventions-treatment-ats.docx
5.	Matua Raki. (2010). *Substance withdrawal management guidelines for medical and nursing practitioners in primary health specialist addiction, custodial and general health settings.* Wellington: Ministry of Health.	Medical and nursing practitioners in primary health, specialist addiction, custodial and general health settings.	This is a 92 page document. It covers information in withdrawal management and settings. It also includes information on alcohol and other drugs. Amphetamine type stimulants are covered on page 21.	https://www.matuaraki.org.nz/uploads/files/resource-assets/substance-withdrawal-management-guidelines-for-medical-and-nursing-practitioners.pdf
6.	Braunwarth, W., Christ, M., Dirks, H., Dyba, J., Hartel-Petri, Drug Commissioner of the German Federal Government. (2016).	Making evidence-based statements on the Efficacy of pharmacological and psychotherapeutic	This is a 219 page document with 10 sections. Its goal was to provide evidence-based medical treatment / interventions for patients with	https://www.aezq.de/mdb/edocs/pdf/literatur/s3-gl-

	Practice guideline: Methamphetamine related disorders. Berlin: Drug Commissioner of the German Federal Government.	Interventions. End user not stated.	methamphetamine-related disorders in Germany. Statements were voted on by experts and consensus ranking. Methamphetamine-related key words are embedded throughout the document.	methamphetamine-related-disorders-long.pdf
7.	The American College of Obstetricians and Gynaecologists: Committee on Health Care for Underserved Women. (2011). *Methamphetamine abuse in women of reproductive age.* Committee Opinion Number 479, March 2011: Reaffirmed 2017.	Methamphetamine abuse in women of reproductive age.	This is a Committee opinion piece that focuses on the effects of methamphetamine in pregnancy and infant outcomes. Literature is reviewed and gaps identified.	https://www.acog.org/Clinical-Guidance-&-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Methamphetamine-Abuse-in-Women-of-Reproductive-Age

Appendix E: Assessing Guideline Concordance with AGREE Criteria

The National Health and Medical Research Council (NHMRC, 2011) endorsed the Appraisal of Guidelines for Research and Evaluation (AGREE) (Brouwers et al., 2010), an international tool designed to assist the development and evaluation of guidelines. The AGREE formed the basis of the quality appraisal process used for this project.

The AGREE quality assessment tool was designed to assist researchers and clinicians to develop and appraise clinical guidelines (Woolf, Grol, Hutchinson et al., 1999). It was updated to the AGREE II in 2009. An AGREE II Reporting Checklist was created in 2016 to enhance completeness of reporting on guidelines (Brouwers et al., 2016). A shortened version, the AGREE GRS, was subsequently produced A copy of the AGREE GRS is provided below.

Although the AGREE GRS is a shorter appraisal tool, it proved to be a viable alternative when use of AGREE II was not feasible and resources were sparse (Brouwers et al., 2012).

NCETA staff piloted the AGREE GRS and found this shortened assessment tool to be unsuitable for some aspects of methamphetamine guidelines. It was determined that a modified version of the AGREE GRS was required for the purposes of this review.

The NCETA-modified tool was subsequently developed based upon the following principles:

- The revised instrument would not compromise AGREE GRS principles
- It would be appropriate for the broad range of candidate methamphetamine-related clinical guidelines
- It needed to include a 'not applicable' option to account for irrelevant items
- It would more precisely reflect the focus of each domain being assessed.
- It would reflect guideline concordance with AGREE GRS principles

The AGREE GRS was modified by refining some items and including other items from the AGREE II Reporting Checklist, to form stand-alone questions. The NCETA-modified instrument comprised 22 items organised within five domains (see 2):

1. Process of development (7 items)
2. Presentation style (3 items)
3. Completeness of reporting (6 items)
4. Clinical validity (3 items)
5. Quality & utility (3 items).

The NCETA-modified AGREE GRS tool retained the existing AGREE GRS domains, items and 7-point scoring scales (with 1 indicating lowest level of concordance with AGREE criteria and 7 indicating highest level of concordance with AGREE criteria). The domains and items that were common to the AGREE GRS and the NCETA-modified tool are presented in

Table E1. The NCETA-modified version of AGREE GRS also included a score per item (as used in AGREE II), rather than by each domain only (as used in AGREE GRS) is presented in Table E2. A full copy of the NCETA-modified instrument is also provided below.

Table E1: Changes made to the AGREE GRS to create the NCETA-modified AGREE

Domain	Original Items	Additional Items
Process of Development	• Were the appropriate stakeholders involved in the development of the guideline? • Was the evidentiary base developed systematically? • Were recommendations consistent with the literature?	• To what extent were the views of the target population (patients, public) sought? • To what extent were the views of the target clinicians/workers sought? • To what extent were the views of experts included in the guideline? • To what extent does the guideline include a description about when the guideline will be reviewed and updated?
Presentation Style	• Was the guideline well organised? • Were the recommendations easy to find? (revised as: Were the recommendations easily identifiable).	• To what extent are the recommendations specific and unambiguous?
Completeness of reporting	• Was the guideline development process transparent and reproducible? (revised as two questions: 1. Was the process transparent? 2. Was the process reproducible?) • How complete was the information to inform decision-making?	• Where evidence is incomplete, to what quality has this been stated? • To what extent have the health benefits, side effects and risks been considered in formulating the recommendations? • To what quality is the tool supported by tools for application? For example, specific assessment tools like the ASSIST, or flow chart decision making tools.
Clinical Validity	• Are the recommendations clinically sound? • Are the recommendations appropriate for the intended patients?	• To what extent are the recommendations appropriate for the intended clinician/AOD worker?
Overall assessment*	• Rate the overall quality of this guideline. • I would recommend this guideline for use in practice. • I would make use of a guideline of this quality in my professional decisions.	

* Renamed as 'Quality and utility' to differentiate it from the final overall appraisal score included in the NCETA-modified tool

Table E2: NCETA-modified clinical guideline assessment tool: domains, assessment criteria and associated items

Domain	Items
1. Process of development	1.1 To what extent was the evidentiary base developed systematically? 1.2 To what extent were recommendations consistent with the literature? 1.3 Was the population (target users, patients, public etc.) to whom the guideline is meant to apply adequately described? 1.4 To what extent were the views of the target population (patients, public) sought? 1.5 To what extent were the views of the target clinicians/workers sought? 1.6 To what extent were the views of experts included in the guideline? 1.7 To what extent does the guideline include a description about when the guideline will be reviewed and updated?
2. Presentation style	2.1 To what extent was the guideline well organised? 2.2 To what extent the recommendations easily identifiable? 2.3 To what extent are the recommendations specific and unambiguous?
3. Completeness of reporting	3.1 To what extent is the guideline development process transparent? 3.2 To what extent is the guideline process reproducible? 3.3 How complete was the information to inform decision making? 3.4 Where evidence is incomplete, to what quality has this been stated? 3.5 To what extent have the health benefits, side effects and risks been considered in formulating the recommendations? 3.6 To what extent is the guideline supported with tools for application? e.g., screening instruments, flowcharts to aid decision-making
4. Clinical validity	4.1 To what extent are the recommendations clinically sound? 4.2 To what extent are the recommendations appropriate for the intended patients? 4.3 To what extent are the recommendations appropriate for the intended clinician/AOD worker?
5. Quality & utility	5.1 Rate the overall quality of this guideline. 5.2 I would recommend this guideline for use in practice. 5.3 I would make use of a guideline of this quality in my professional decisions.

Every included guideline was appraised by three reviewers.

A spreadsheet was developed to standardise scoring procedures across reviewers and minimise scope for error. Each item within the five domains was assigned a score between 1 and 7 (with 1 indicating the lowest level of concordance with AGREE Criteria quality and 7 indicating the highest, plus a non-applicable option). Items considered not applicable to a given guideline were omitted from the scoring procedures. The scoring system allowed for discrepancies between appraisers.

For each domain, the item scores were summed to provide a composite domain score. The number of relevant items was then calculated (i.e., excluding those designated as not applicable) as well as the maximum and minimum possible score for that domain. When the non-applicable option was nominated, the corresponding maximum and minimum scores were adjusted accordingly. This process was repeated for each domain, and for each of the three reviewers' scores.

A total domain score was calculated by summing the composite domain score for each of the three reviewers. Similarly, the total maximum and minimum score for each domain was calculated by summing the maximum/minimum number of items in each domain for each reviewer.

To obtain an overall percentage score for each domain, the total minimum score possible was subtracted from (a) the total domain score and (b) the total maximum score possible. The two resultant numbers were then divided (i.e., $\frac{a}{b}$) and multiplied by 100. As recommended by Brouwers et al. (2010) a nominal threshold of ≥70% was set as the quality guideline for each respective domain.

To calculate a single final score for the guideline, the total scores for each domain were summed. These scores were then subjected to the same procedure as above to calculate the final overall percentage score for each guideline.

AGREE GRS INSTRUMENT

Process of development

1. Rate the overall quality of the guideline development methods.

    Consider:
    *   *Were the appropriate stakeholders involved in the development of the guideline?*
    *   *Was the evidentiary base developed systematically?*
    *   *Were recommendations consistent with the literature?*

Lowest Quality 1	2	3	4	5	6	Highest Quality 7

Presentation Style

2. Rate the overall quality of the guideline presentation.

    Consider:
    *   *Was the guideline well organised?*
    *   *Were the recommendations easy to find?*

Lowest Quality 1	2	3	4	5	6	Highest Quality 7

Completeness of Reporting

3. Rate the completeness of reporting.

    Consider:
    *   *Was the guideline development process transparent and reproducible?*
    *   *How complete was the information to inform decision-making?*

Lowest Quality 1	2	3	4	5	6	Highest Quality 7

Clinical Validity

4. Rate the overall quality of the guideline recommendations.

    Consider:
    *   *Are the recommendations clinically sound?*
    *   *Are the recommendations appropriate for the intended patients?*

Lowest Quality 1	2	3	4	5	6	Highest Quality 7

NCETA-MODIFIED AGREE GRS INSTRUMENT

Methamphetamine Clinical Guideline: [Insert Author. Year. Title. Publisher. Place of Publication]

1. PROCESS OF DEVELOPMENT	LOWEST CONCORDANCE 1	2	3	4	5	6	HIGHEST CONCORDANCE 7	NA[1]
1. To what extent was the evidentiary base developed systematically?								
2. To what extent were recommendations consistent with the literature?								
3. Was the population (target users, patients, public etc.) to whom the guideline is meant to apply adequately described?								
4. To what extent were the views of the target population (patients, public) sought?								
5. To what extent were the views of the target clinicians/workers sought?								
6. To what extent were the views of experts included in the guideline?								
7. To what extent does the guideline include a description about when the guideline will be reviewed and updated?								
2. PRESENTATION STYLE	LOWEST CONCORDANCE 1	2	3	4	5	6	HIGHEST CONCORDANCE 7	**NA[1]**
1. To what extent was the guideline well organised?								
2. To what extent the recommendations easily identifiable?								
3. To what extent are the recommendations specific and unambiguous?								
3. COMPLETENESS OF REPORTING	LOWEST CONCORDANCE 1	2	3	4	5	6	HIGHEST CONCORDANCE 7	**NA[1]**
1. To what extent is the guideline development process transparent?								
2. To what extent is the guideline process reproducible?								
3. How complete was the information to inform decision making?								
4. Where evidence is incomplete, to what extent has this been stated?								

5. To what extent have the health benefits, side effects and risks been considered in formulating the recommendations?								
6. To what extent is the guideline supported with tools for application? e.g., screening instruments, flowcharts to aid decision-making.								
4. CLINICAL VALIDITY	LOWEST CONCORDANCE 1	2	3	4	5	6	HIGHEST CONCORDANCE 7	NA[1]
1. To what extent are the recommendations clinically sound?								
2. To what extent are the recommendations appropriate for the intended patients?								
3. To what extent are the recommendations appropriate for the intended clinician/AOD worker?								
5. QUALITY & UTILITY	LOWEST CONCORDANCE 1	2	3	4	5	6	HIGHEST CONCORDANCE 7	NA[1]
1. Rate the overall quality of this guideline.								
2. I would recommend this guideline for use in practice.								
3. I would make use of a guideline of this quality in my professional decisions.								

Key: 1 Not Assessable

SCORING

Formula for calculating domain scores:

Domain scores were calculated by summing all the scores of the individual items in a domain and by scaling the total as a percentage of the maximum possible score for that domain.

Example

If three appraisers gave the following scores for Presentation Style items 2.1, 2.2, and 2.3

Appraiser	Item Scores			Total
	2.1	**2.2**	**2.3**	
Appraiser 1	5	6	6	**17**
Appraiser 2	5	5	6	**16**
Appraiser 3	5	5	6	**16**
Total	**15**	**16**	**18**	**49**

Minimum possible score = 1 (lowest quality) x 3 (items) x 3 (appraisers) = 9

Maximum possible score = 7 (highest quality) x 3 (items) x 3 (appraisers) = 63

The scaled domain score would be calculated as follows:

$$\frac{\text{Obtained score} - \text{minimum possible score}}{\text{Maximum possible score} - \text{minimum possible score}} \times 100$$

$$\frac{49-9}{63-9} \times 100 = \frac{40}{54} \times 100 = 0.74 \times 100 = 74\%$$

Appendix F: Detailed assessment of guidelines against AGREE Criteria

Those 15 are the guidelines shown above that are numbered 1 to 15 (the remainder, numbered 16 to 27, scored below 70% in their quality appraisal) (see Table F1). Specific AGREE scores by domain are also shown in Table F1.

Table F1: Identified Australian methamphetamine-related clinical guidelines, associated domain scores concerning their concordance with AGREE criteria and overall appraisals.

Domains: 1) Process of Development 2) Presentation Style 3) Completeness of Reporting 4) Clinical Validity 5) Quality & Utility

No.	Methamphetamine-related Clinical Guideline	Domain Scores					Overall Appraisals	
		1	**2**	**3**	**4**	**5**	**Domains 1-5**	**Domains 2-5**[*]
1	Brief cognitive behavioural intervention for regular amphetamine users	56%	76%	72%	87%	91%	72%	**80%**
2	Models of intervention & care for psychostimulant users	66%	83%	69%	85%	69%	72%	**75%**
3	ATOD clinical guidelines for nurses & midwives	33%	83%	55%	83%	83%	59%	**72%**
4	Practical guide for frontline workers	68%	100%	70%	93%	83%	79%	**83%**
5	Guidelines for emergency departments	46%	85%	61%	87%	83%	66%	**76%**
6	Handbook for Aboriginal alcohol & drug work	44%	85%	48%	91%	94%	64%	**73%**
7	Methamphetamine Treatment Guidelines: Practice Guidelines for Health Professionals (Second Edition) ∆	36%	81%	61%	89%	80%	62%	**74%**
8	AOD withdrawal practice guidelines	33%	81%	54%	94%	87%	61%	**74%**
9	Counselling guidelines: alcohol & drug issues∆	60%	92%	44%	83%	83%	66%	**70%**
10	QLD alcohol & drug withdrawal clinical practice guidelines	27%	89%	45%	89%	85%	57%	**71%**
11	Management of substance use during pregnancy, birth & postnatal period	44%	96%	81%	96%	100%	63%	**71%**
12	Management of acute presentations related to methamphetamine use: Clinical guideline for adults and adolescents.	58%	86%	44%	83%	67%	71%	**79%**

No.	Methamphetamine-related Clinical Guideline	Domain Scores					Overall Appraisals	
		1	**2**	**3**	**4**	**5**	**Domains 1-5**	**Domains 2-5***
13	Psychotherapy … treatment manual & response	59%	94%	66%	93%	89%	73%	**81%**
14	QUICKFIX: Identify & Intervene ... in primary health care	51%	83%	49%	89%	80%	64%	**70%**
15	Acute assessment & management of ATS intoxication & toxicity	29%	83%	58%	91%	87%	67%	**79%**
16	Guidelines for general practitioners	41%	85%	56%	76%	74%	60%	69%
17	AOD withdrawal practice guidelines: acute inpatient & residential services	19%	69%	27%	65%	50%	38%	47%
18	Fact Sheet: management of stimulant use	13%	46%	11%	56%	15%	24%	29%
19	Psychostimulant early intervention flow chart	24%	78%	36%	91%	65%	54%	63%
20	Responding to challenging behaviour	31%	74%	39%	81%	78%	52%	62%
21	Psychosocial interventions professional practice guidelines	48%	87%	40%	89%	83%	62%	68%
22	Drug & alcohol withdrawal clinical practice guidelines: NSW	37%	89%	35%	89%	80%	57%	66%
23	AOD handbook for health professionals	48%	87%	38%	80%	70%	58%	63%
24	Nursing & midwifery practice: identifying & responding to drug & alcohol issues	32%	78%	38%	70%	63%	49%	57%
25	CARPA standard treatment manual	37%	80%	42%	70%	65%	53%	60%
26	Drug & alcohol: management of methamphetamine dependence in pregnancy	18%	76%	19%	59%	43%	35%	43%
27	Assessment & management of psychostimulant users	24%	67%	44%	65%	50%	48%	56%

* 'Process of development' domain scores excluded in overall appraisal scores.

Δ Assessed by only two assessors